

STANDARD ITEM 281
Ford Transit or Equal
Requirements in Addition to FS 307

2.1 APPLICABLE REFERENCES

- Title 49 CFR, part 38, subpart B - Americans with Disabilities Act (ADA)
- Federal Motor Vehicle Safety Standard Number 207-Seating Systems
- Federal Motor Vehicle Safety Standard Number 210-Seat Belt Assembly Anchorages

3.2.2 PAYLOAD CAPACITY

The vehicle shall have the payload capacity to transport the driver, front passenger, ambulatory passengers, and persons with disabilities in a wheelchair legally in any seating variation for the furnished seating configuration. The following weights and conditions shall be used in the computation:

- a. Weight of driver - 200 pounds
- b. Weight of front passenger - 200 pounds
- c. Weight of the ambulatory passenger - 200 pounds
- d. Weight of wheelchair passenger - 350 pounds
- e. Weight for parcels and miscellaneous items - 200 pounds

3V.5.5 WHEELCHAIR VAN BODY DESIGN

Standard Item Number 281 shall be furnished with:

- 1 OEM Driver's Seat
- 1 OEM Front Passenger Seat
- 8 seating positions when no wheel chairs are in use
- 2 Wheelchair Positions
- 1 Rear Wheelchair Lift

Sample floor plan shown in figure 1 and 2.

Note: use of wheelchair position(s) reduces passenger seating capacity.

3V.5.5.1 MEDIUM ROOF

An OEM medium height roof shall be provided. The interior height (floor to headliner at center of passenger compartment) shall be a minimum of 72 inches.

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3V.5.5.2 DOORS

OEM cargo doors shall be provided at the rear of the vehicle. The OEM cargo doors at the rear shall provide the required ADA opening and door height. The door opening shall be of sufficient width and height to accommodate the wheelchair lift specified in 3V.5.5.12. The overhead clearance between the top of the door opening and the raised lift platform shall be a minimum of 56 inches. An OEM sliding door shall be provided at the curbside of the vehicle.

3V.5.5.2.1 CONSTRUCTION

Not used on this item.

3V.5.5.2.2 DOOR STOPS

OEM rear cargo door stops shall be provided for each door. Door stops shall be of the magnetic or positive contact (friction) type.

3V.5.5.2.3 REFLECTORS

A reflective device shall be provided on each rear cargo door. Each reflective device shall occupy at least 14 square inches. When the door(s) are in the fully open position, the reflective device shall be positioned to provide maximum visibility.

3V.5.5.3 AMBULATORY PASSENGER ENTRANCE DOOR (modified OEM door)

Not used on this item.

3V.5.5.4 AIR CONDITIONING AND HEATING SYSTEM

The driver's compartment shall be furnished with the chassis manufacturer's hot water, fresh air, heater, defroster, and air conditioning system. An OEM rear auxiliary air conditioning and heating unit shall be provided. The auxiliary unit shall be provided with at least four registers. The registers shall be capable of controlling the volume and direction of air.

3V.5.5.5 INSULATION

The vehicle shall be insulated to reduce the transfer of heat and sound. Insulation shall be provided in both walls and roof. The insulation in the walls shall have a minimum R-value of 5. The insulation in the ceiling shall have a minimum R-value of 8. The insulation shall be a non-settling type, vermin-proof, mildew-proof, fire retardant, non-toxic, and non-hygroscopic.

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3V.5.5.6 SUB FLOOR

A sub floor that extends the full length and width of the passenger compartment shall be installed over the OEM floor. The sub floor shall be constructed of sections of aluminum extrusions that interlock together. Series L-Track shall be installed and recess mounted to the aluminum extrusions. The L-Track shall "run" fore and aft. The sub floor shall be securely attached to the OEM floor. All fasteners shall be of corrosion resistant materials. Floor areas shall withstand a distributed load of 150 pounds per square foot without noticeable deformation. The sub floor shall be covered with the floor covering specified in 3V.5.5.7.

As an alternative, the floor system shall consist of a series of longitudinal, parallel floor mounted steel tracks inserted into a FMVSS 302 compliant composite base throughout the vehicle. The floor base shall be constructed of a minimum 1.5 inch water resistant composite material. The floor system shall be FMVSS 302 compliant. The floor tracks shall be constructed of A1011 HSLA 50 (high strength low alloy) materials. The tracks shall be mechanically fastened through the vehicle floor using SAE grade 8 machine bolts with self-locking grade 8 nuts and washers. The system shall conform to FMVSS 207 & 210 standards (capable of meeting these requirements with 3 seat position in one row at the same time). The track system shall be capable of accepting both "A" and "L" style tie down systems. Wheelchair tie downs shall be allowed to be positioned anywhere within the track system (front to back and side to side) for wheelchair transport as needed up to maximum physical capacity. Seats shall easily install or be removed without the use of tools. Seat latching system shall be easily operated (locked or unlocked) without need of operator bending over, using an operator's foot. All fasteners shall be of corrosion resistant materials. Floor areas shall withstand a distributed load of 150 pounds per square foot without noticeable deformation. The sub floor shall be covered with the floor covering specified in 3V.5.5.7.

3V.5.5.7 FLOOR COVERING

The passenger compartment floor surface shall be covered with Altro Transflor Meta, or approved equal flooring. The floor covering shall have a minimum thickness of 2.2 millimeters. The floor covering shall harmonize with the interior color and decor. The floor covering shall be securely bonded to the sub floor. Bonding and adhesive materials shall be waterproof and of the type recommend by the floor covering manufacturer. All floor covering wall panel joints shall be sealed with an adhesive. Floor covering seams shall be butt jointed and heat welded to prevent water penetration. The floor covering shall be free of any protrusions or gaps greater than ¼ inch. The driver's and front passenger seat floor area shall be covered by the chassis manufacturer's standard flooring.

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3V.5.5.8 WALLS AND HEADLINER

The passenger compartment shall be finished with OEM interior walls. The ceiling shall be finished with an OEM headliner. The color of the wall panels shall be molded into the entire component. The color of the walls and headliner shall harmonize with the interior color and decor. Wall panels shall not rattle during transit.

3V.5.5.9 DRIVER'S AND CO-DRIVER'S SEAT

The chassis manufacturer's standard reclining bucket seats shall be provided for the driver and front passenger. Seats shall be upholstered in vinyl.

3V.5.5.10 PASSENGER SEATS

Passenger seating of the type and quantity specified herein shall be provided. Seats shall comply with FMVSS 207. Seats shall be tested and certified to the requirements of FMVSS 207 by an accredited laboratory or a licensed professional engineer. A test report shall be provided - see paragraph 3V.5.5.23.

3V.5.5.10.1 MOVABLE SEATS

Movable type seats shall offer a flexible seating arrangement. Seats shall utilize a wheeled seat base design and be capable of being easily and quickly moved without lifting. Seats shall be removable without use of tools. All seats shall provide a minimum seat width of 17 inches per passenger and a minimum depth of seat (front to back contour) of 17 inches. The seats shall be upholstered with a commercial grade vinyl. The upholstery color shall be coordinated with the van interior. Five (5) movable seats, of the single type, shall be provided. Each seating position shall have a 3 point seatbelt. Seats shall be located as shown in figure 1 and 2.

3V.5.5.10.2 SWIVEL- FOLDING OR FLIP-FOLD SEATS

Swivel-folding or flip-fold type seats shall allow space for the wheelchair passengers. Each swivel-folding or flip-fold seat shall be capable of being stowed in an upright position against the van wall by flipping the bottom cushion up and swiveling (or folding) against the wall. All seats shall provide a minimum seat width of 17 inches per passenger a minimum depth of seat (front to back contour) of 17 inches. The seats shall be upholstered with a commercial grade vinyl. The upholstery color shall be coordinated with the van interior. Three (3) swivel-folding or flip-fold seats, of the single type, shall be provided. Each seating position shall have a 3 point seatbelt Swivel-folding or flip-fold seats shall be located as shown in figure 1 and 2.

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3V.5.5.11 INTERIOR LIGHTING

Interior lighting shall be added to provide additional illumination for the passenger compartment. Six (6) LED type lights shall be furnished. Lights shall be mounted in the ceiling. All interior passenger compartment lighting shall activate immediately upon opening of any door. Lights shall automatically turn on when the wheelchair lift door is opened. Lights shall operate with or without the engine running.

3V.5.5.12 WHEELCHAIR LIFT

An electric powered hydraulic wheelchair lift shall be provided. The lift shall be installed at the rear of the van and stow inside the van while not in use. The lift shall be of the single solid platform type. The lift shall have a rated capacity of 800 pounds. The wheelchair lift platform shall have a minimum useable width of 34 inches and a minimum useable length of 51 inches. The lift shall incorporate an emergency method of deploying, lowering to the ground level with a lift occupant, and raising and stowing the empty lift if the power to the lift fails. The wheelchair lift light(s) shall be capable of illuminating the lift area and the areas just outside the vehicle to the front and sides. When the doors are opened, the wheelchair light(s) shall operate automatically. A standee handrail shall be provided on both sides of the lift platform. The lift shall incorporate a positive locking mechanism to prevent drifting from the stowed position and to reduce rattling during transit. The lift shall comply with FMVSS and ADA requirements. The van shall be equipped with either: a Braun Corporation Century - 2 Series; Ricon Incorporated S-Series; or approved equal wheelchair lift.

3V.5.5.12.1 CONTROL BOX

The wheelchair lift shall be provided with a hand held control box capable of controlling all lift functions. The control box shall be weather proof. The control box shall be conveniently mounted and within easy reach of the wheelchair operator. The control switches shall be clearly and legibly marked as to their function.

3V.5.5.12.2 INTERLOCKS

A safety interlock system for the wheelchair lift shall be furnished. Interlocks shall be installed to prevent wheelchair lift operation unless all of the following conditions are met: transmission is in the "Park" position; the emergency brake is applied; the wheelchair lift's safety belts are fastened or all the wheelchair lift's safety barriers are in place. Interlocks shall be fully automatic, solid state, microprocessor controlled, capable of self-diagnosis.

3V.5.5.12.3 WHEELCHAIR LIFT INSTALLATION

The wheelchair lift shall be installed in accordance with the manufacturers' recommendations, requirements, and specifications. The lift shall not rattle during transit.

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3V.5.5.13 WHEELCHAIR SECUREMENT AND OCCUPANT RESTRAINT SYSTEM

The van shall be provided with two (2) wheelchair positions. At each wheelchair position, a wheelchair securement system shall be provided to securely hold the wheelchair during transit. The securement system shall include four (4) self-tensioning retractors designed for use with Series L-Track floor anchorage. Recessed or flush mounted type Series L-Track aluminum floor anchorage with a natural finish shall be installed. The anchorage shall be positioned such that it is capable of accommodating wheelchairs of varying designs and widths. The anchorage shall be configured for forward facing wheelchairs. A storage bag for the straps and retractors shall be provided. An occupant restraint system shall be provided for the occupant of the wheelchair at each wheelchair position. The restraint system shall be a seat belt assembly permanently attached to the floor or side of the vehicle or to the wheelchair lock supports. Each restraint system shall be equipped with a retractor or other device, that keeps the seat belt webbing or strap off the floor when the seat belt is not in use. The wheelchair securement and occupant restraint system shall be installed in accordance with the manufacturer's instructions. Wheelchair securement and occupant restraint anchorage shall comply with FMVSS 210. Wheelchair securement and occupant restraint anchorages shall be tested and certified to the requirements of FMVSS 210 by an accredited laboratory or a licensed professional engineer. A test report shall be provided - see paragraph 3V.5.5.23. Q-Straint Incorporated, self-tensioning, continuous adjustment wheelchair tie down system with combination retractable lap and shoulder belt, kit part number Q-8300-A1-L shall be provided.

3V.5.5.14 STANCHION

A stanchion shall be provided in the van for safe boarding behind the first row passenger seat (forward of the curbside doors). The stanchion shall have a cross-sectional diameter between 1-1/4 inches and 1-1/2 inches. The stanchion shall be constructed of stainless steel tubing. The stanchion shall be padded with injection-foam covered tubing. The stanchion shall be attached to structural members in the floor and roof. The stanchion shall be installed so as not to restrict the full aft and recline seat adjustments of the passenger's seat.

3V.5.5.15 BARRIER PANELS

Not used on this item.

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3V.5.5.16 CURBSIDE RUNNING BOARDS

Two curbside running boards shall be provided. One running board shall be located below the front passenger door; the other located below the curbside sliding door. The length of the running boards shall be approximately that of the front passenger door and curbside sliding door, respectively. The minimum step tread width shall be 5 inches. The maximum step tread width shall be 10 inches. The height of the steps, as measured from the ground to the top surface of the step, shall be not greater than 14 inches. The steps shall be fabricated from steel framing members. The steps shall be constructed of expanded steel having a self-cleaning, see-through diamond surface mesh pattern that reduces slipping and snow accumulation. All running board components shall be coated or constructed with corrosion resist materials. The running boards shall be securely mounted to the vehicle to prevent flexing when used by vehicle occupants during entry and exit. Each running board shall be capable of withstanding a test weight of 500 pounds without permanent deformation of the running board or its supporting structure.

3V.5.5.17 DRIVER'S SIDE RUNNING BOARD

Not used on this item

3V.5.5.18 REAR STEP

Not used on this item

3V.5.5.19 OVERHEAD COMPARTMENT(S)

OEM overhead compartment(s) shall be provided.

3V.5.5.20 COT FASTENER SYSTEM

Not used on this item.

3V.5.5.21 PAINTING

Unless otherwise specified, the standard exterior color of the van shall be the chassis manufacturer's Oxford White.

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3V.5.5.22 EMERGENCY AND SAFETY EQUIPMENT

The following equipment shall be furnished and shipped loose in each wheelchair van:

- a. Fire extinguisher. Shall have an Underwriter's Laboratory (UL) rating of 2A:10-B:C, or greater. Fire extinguisher weight - 5 pound minimum. The fire extinguisher shall be equipped with a fire hose, safety pin and dial indicator.
- b. First aid kit. A 16-unit minimum all-in-one type (First Aid-CPR-Body Fluid) kit shall be furnished. The first aid kit shall be contained in a metal or plastic box designed to seal out dirt and moisture.
- c. Reflectors. Three (3) bi-directional emergency reflective triangles conforming to the requirements of FMVSS Number 125.

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3V.5.5.23 ADDITIONAL DOCUMENTS REQUIRED WITH OFFER

- Seat, safety belt, and anchorage documents verifying compliance with applicable FMVSS and American with Disabilities Act (ADA) requirements. The documents shall include a test report conducted by a recognized laboratory or licensed professional engineer (PE). The documentation shall be signed, dated, and on the testing organization's letterhead.
- Ford QVM certification documents.
- National Mobility Equipment Dealer's Association (NMEDA) Quality Assurance Program (QAP) certificate of accreditation.
- Weight distribution and estimated payload analysis. Each wheelchair vehicle's payload capacity, horizontal, lateral, and vertical CG shall be determined. Horizontal and vertical shall be determined by completing an NTEA UltraMod spreadsheet (available at www.ntea.com). A copy of the UltraMod spreadsheet and lateral calculation shall be included. The analysis shall include at least the weight of: chassis; ambulatory passengers; passenger seating; ramp; and all other major equipment and materials. The analysis shall show that the wheelchair vehicle offered is within the weight distribution and CG requirements set by the chassis manufacturer.
- Drawings and Photos. Detailed exterior and interior drawings or photos of the wheelchair van specified herein shall be provided. At a minimum drawings or photos shall include:
 1. Exterior views. Exterior views shall include: right side elevation, left side elevation, front elevation, and rear elevation views.
 2. Interior views. Interior views shall include: passenger compartment front elevation, curbside; and street side elevation. These drawings or photos shall include all mounted items that are specified by the minimum requirements.
 3. Floor Plan. The floor plan shall depict all major equipment specified herein and shall include at least: passenger seating; wheelchair positions; wheelchair lift; barrier panels; stanchions; running boards, as applicable.

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Figure 1

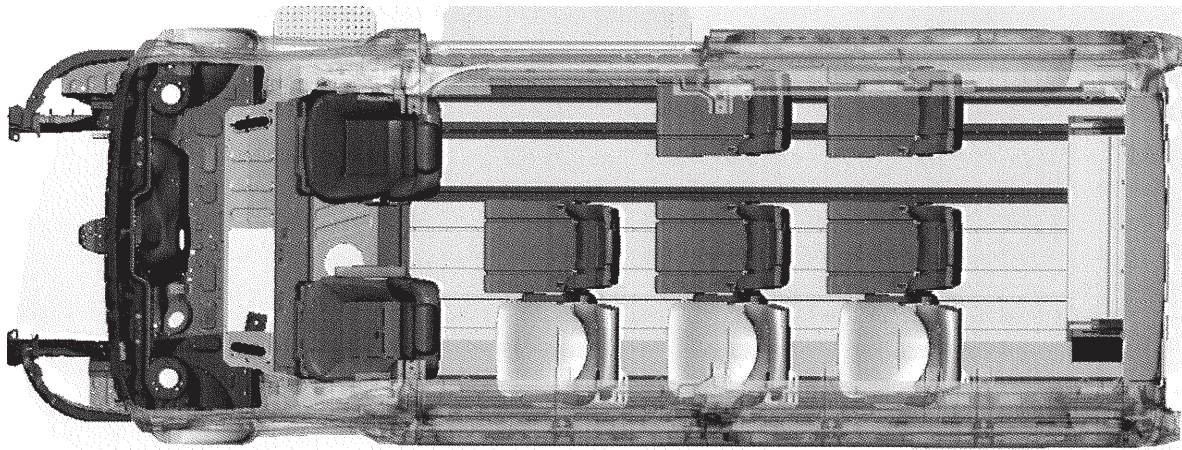
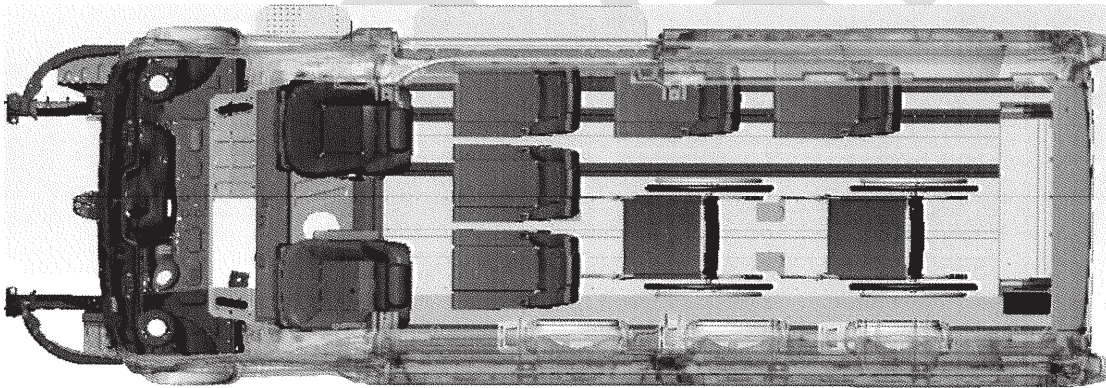


Figure 2



3V.6 ADDITIONAL VEHICLE OPTION CODES

The Code only applies if listed in the Optional Equipment section of AutoChoice & the Federal Vehicle Standards.

NOTE: SELECTING SOME OPTIONS MAY RESULT IN THE MINIMUM REQUIREMENTS FOR A STANDARD ITEM NOT BEING COMPUED WITH!!

CODE "HLF" WHEELCHAIR LIFT- LOCATE TO FRONT BEHIND ENTRY DOOR

When code HLF is specified,.A Full-Size, 7 Passenger/3 Wheel Chair, Curbside Lift configuration shall be furnished.