



Z-FRAME™ FACT SHEET

Product: Z-Frame™ Chassis
The Low-Floor Ford Super Duty F-450/F-550 Cab Chassis Trucks

DALLAS SMITH CORP. ENGINEERING AT WORK

Low floor chassis: Z-Frame™

Suspension: Wide-Trac™ Axleless® air ride independent suspension

PRODUCT COMPARISON

Ford Super Duty F-450/F-550	Z-Frame™ Chassis	Standard Chassis
Gross Vehicle Weight:	17,950 lbs	17,950 lbs
Ground Clearance:	8"	7.9"
Floor Height:	14"	32.4"
Width Between Wheelhouses:	65"	46.8"
Wheelhouse Height (top of frame):	23.6"	9.7"
Wheelhouse Length:	40.5"	40.5"
Tire Track Width-Rear:	85.6"	74"
Overall Width:	96"	93.6"

AVAILABLE OPTIONS

Gas or diesel engine

Body kneeling: Drops rear chassis an additional 4 inches when loading/unloading by releasing air from suspension.

APPLICATIONS

Ambulance	Enclosed Utility Service Body
Cargo Van/Box Van	Low Flat Bed
Stake Body with Fences	Book Mobile
Shuttle Bus	Laundry Truck
Open Utility Service Body	Pick-up Truck
First Response Vehicle	

THE BENEFITS

SAFETY

Fewer slips and falls and lifting injuries due to strain.

COST EFFICIENCIES

Lowered worker's compensation claims of workers who use this vehicle.

Load and unload quicker for more deliveries per day.

BETTER HANDLING

Front wheel drive offers better traction.

INCREASED CARGO SPACE

Low floor means more cubic capacity in a cargo van.

Axleless® suspension offers more space between the wheel wells.

BETTER FUEL ECONOMY

Lowered box heights result in a shorter overall vehicle profile height for a reported savings of 7-8% on fuel costs.

ALL ACCESS

Low floor vehicles are ADA-compliant Equal Access (American's with Disabilities Act) allowing handicapped riders to board and depart with a ramp instead of a lift gate.

...of FRONT WHEEL DRIVE

1. Better traction/handling on slippery roads, especially snow. If the front wheels slip, the vehicle is more likely to stay in line.
2. The power train is packaged entirely in the vehicle's engine compartment, providing significant weight distribution to the front drive wheels, further adding traction and control.

...of WIDE-TRAC™ LOW FLOOR

1. Improved vehicle stability and handling thanks to the extremely low vehicle center of gravity in combination with a Wide-Trac™ air ride rear suspension.
2. Improved vehicle lateral stability making rollovers less likely and improving operator and passenger safety.
3. Improved road handling as the vehicle remains in better contact with the road surfaces in various types of vehicle direction changes and in a straight line.

...of AIR RIDE INDEPENDENT REAR SUSPENSION

1. Improved cushion ride for the operator, passengers and cargo as individual trailing arm suspensions encounter road surfaces independently over a wide-trac™ stance and supported by air springs.
2. Improved vehicle ride height adjustments with "leveling valves" positioned for each rear wheel.
3. Improved loading/unloading with kneeling option that releases air from suspension system to drop the body 4 inches closer to the ground. Option activated by an automatic pressure valve to deflate and inflate the suspension.

THE RESEARCH

The top two causes of trucking injuries were in two categories: Lifting (21.7%) and Slips and Falls (20.3%). Z-Frame™ low floor chassis combat both.¹

More truck driver injuries occur each year due to slipping and falling from “non-moving vehicles” than from any other cause.¹

The University of Michigan “estimates that slips and falls in and around vehicles account for as much as 25% of all driver injuries.”¹

Liberty Mutual Insurance Company found that “one in every nine truck driver injuries is a result of a slip and fall from a non-moving vehicle, and that those injuries account for 15-25% of all trucking employee injuries.”¹

The California Department of Industrial Relations studied disabling injuries to drivers in and around non-moving trucks and tractors for six months. The results show “that 84% involved cab entry or exit, and of those, 88% were slips and falls.”¹

The International Brotherhood of Teamsters found that “11.4% of driver accidents involve falls from vehicles, with the only larger accident category involving lifting heavy objects.”¹

A Professional Drivers Council for Safety study of motor carrier injuries in the state of New York showed that “45% involved slips and falls from stationary vehicles” and that those accidents were most likely to happen when loading or unloading cargo.¹

¹Fleet Owner, April 2004, Source: American Trucking Association

Other...

IWIF (Injured Workers' Insurance Fund), a Maryland-based workers' compensation insurance company, ranks the *vehicle* first on its top ten list of transportation injury sources. Also, *truck driver* tops its list of occupations with the most injuries.

Employees who continue to work while having non-acute back problems are now included as having a ADA classified “disability.” Different hand rails, bigger mirrors, longer loading ramps, powered lift gates, etc. Employers will have to spend more money and more effort.