



Freedman Seating Company  
Getting you there safely!

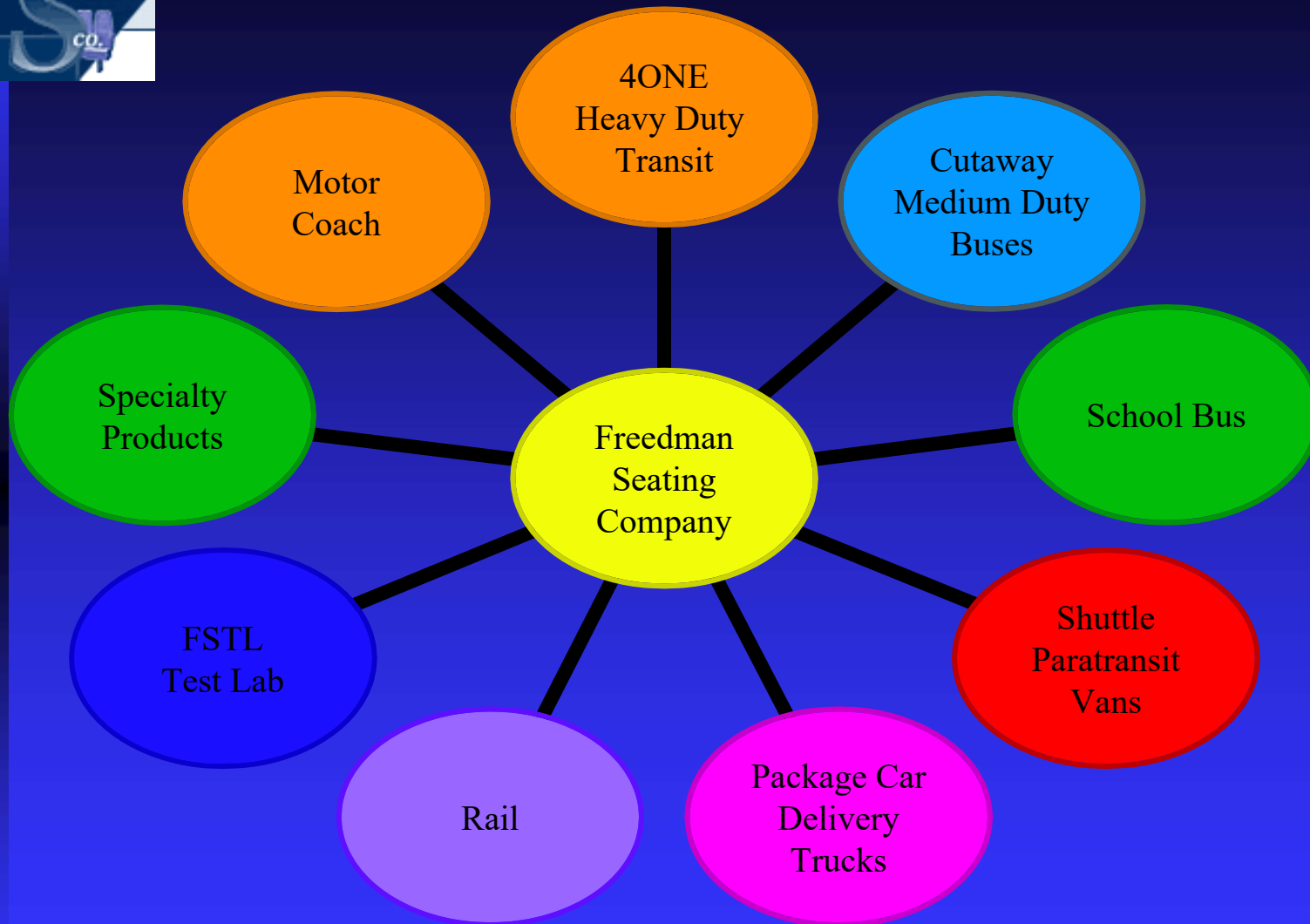
**CASTA Conference  
2017**



## Who Is Freedman Seating?

- Office and Mfg. in Chicago, IL
- 125-year old company
- 2,500-3,000 seats produced daily (400+ Buses and vans of various sizes per week)
  
- Outstanding on-time delivery performance 95+%
- 925+ employees
- ISO 9001:2008
- Vertically integrated manufacturer
- Partnerships in Mexico, China, Italy, Spain and Poland

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# Today's Agenda

Review of  
NHTSA

National Highway Safety Traffic Safety  
Administration

New Ruling on Seat Belts in Motor  
Coaches

FMVSS 208

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## FMVSS (Federal Motor Vehicle Safety Standards) 208

- FMVSS 208 – Specifies equipment requirements for active and passive restraint systems – seat belts.
- This standard applies to passenger cars, multipurpose passenger vehicles, trucks, and **buses**.

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## FMVSS – 208 Amendment Review

- NHTSA is amending FMVSS No. 208 to require lap belt/shoulder belts (3 Point) at all seating positions on:
  - ◆ Over the road buses; and
  - ◆ Non over the road buses with the GVWR greater than 26,000 GVWR, exceptions being “transit buses”, “school buses”, “prison buses”, and perimeter – seating buses”

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## FMVSS – 208 Review- Definitions

- A Bus is defined as: “a motor vehicle with motive power, except a trailer, designed for carrying more than 10 persons.
- Over the road bus (Coach Style Bus) means a bus characterized by an elevated passenger deck located over a baggage department.
- Transit Bus means a bus that is equipped with a stop request system sold for the public transportation provided by, or on behalf of, a State or Local government.
- Stop request system means a vehicle-integrated system for passenger use to signal to a vehicle operator that they are requesting a stop.

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## FMVSS – 208 Review- Definitions

- A school bus is 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.
- Prison Bus means a bus manufactured for the purpose of transporting persons subject to involuntary restraint or confinement and has design features consistent with that purpose.
- A perimeter-seating bus is a bus that has 7 or fewer designated seating positions rearward of the driver seating position that are aisle facing.

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## FMVSS – 208 Amendment Review

- When will this be mandated?
  - ◆ Beginning in Nov. 2016 newly manufactured over the road buses and non over the road buses with greater than 26,000 GVWR, will be required to be equipped with lap and shoulder belts for each driver and passenger seat. Exceptions being: “transit buses”, “school buses”, “prison buses”, and “perimeter-seating buses”

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# FMVSS – 208 Amendment Review

## ■ Relevant Requirements:

- ◆ Lap/shoulder belt system for passenger seats to meet provisions for seat belt adjustment and fit, so that the seat belts can accommodate children as well as large (95<sup>th</sup> percentile) adult males, be lockable for use with the child restraint system , and be releasable at a single point and by a push button action.
- ◆ Seat belt anchorages, both torso and lap, on passenger seats to be integrated into the seat structure, so as not to impede emergency egress.

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# FMVSS – 208 Amendment Review

## Freedman 3 Pt Seats:



GO-ES



Standard 3PT



AMAYA Torino G

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# FMVSS – 208 Amendment Review

## ■ Frequently asked questions:

- ◆ My bus is part of a “transit system”, do I need lap/shoulder belts?
  - ◆ If it is an “over the road bus”, the answer is **yes**.
  - ◆ If it is **NOT** an over the road bus, and the bus lacks a stop-request system, the answer is yes.
- ◆ A transit bus (an exempt from having seat belts) must:
  - ◆ Not be an “over the road” bus
  - ◆ A GVWR greater than 26,000GVWR
  - ◆ Sold for public transportation provided by, and or on behalf of a State or local government and be
  - ◆ Equipped with a stop-request system.

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## FMVSS – 208 Amendment Review

- My bus is between 10,000 and 26,000 GVWR. Do I need lap/shoulder belts?
  - ◆ If the bus has an elevated passenger deck located over a baggage compartment, the answer is **yes**. If not, **NO**
  - ◆ Many Mid Size bus OEM's are adding two place lap belts as standard on buses.
  - ◆ Freedman Seat frames are “seat belt” ready for aftermarket seat belts.
    - ◆ Standard lap belts, Retractor belts, and USR's (Under seat retractors) are available.

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## FMVSS – 208 Amendment Review

- Can Shoulder Belts on seats next to wall be attached to the wall or a bar?
  - ◆ No, all seat belts (lap and shoulder) must be anchored to the seating structure. There are exceptions for the belt anchorages in the last two of the coach (if there are no wheelchair position or side emergency door behind these seats) and in the driver seating position.

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## Freedman FSTL (Freedman Seating Test Laboratory)

- Complete Test Facility
- In Vehicle Testing
- Strength and Static Pull Testing
- Cyclic Fatigue and Endurance Testing
- Dynamic Impact Testing
- Pendulum Tests

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## Freedman FSTL (Freedman Seating Test Laboratory)

- Pull Test Standards on Lap/Shoulder Belt (3 Point Seats):
  - ◆ Apply 3000 lbs force simultaneously to lap and shoulder belts per seating position.
  - ◆ In addition, apply a forward load equal to 20 times weight of the seat applied to seat's center of gravity.
  - ◆ Reach and sustain load for 10 seconds. Permanent deformation of seating structure is not considered a failure, if force is sustain for specified time.

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# FMVSS – 208 Amendment Review

## Questions

Parting Thought: CVSS Notice for Proposed Rule Making Change:

3-POINT SEATS FOR ALL BUSES + VANS

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