



HEART BEAT

2023

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A technologist's perspective on the evolution of intermodal trucking technologies.



A Retrospective of Intermodal Technology

Intermodal Container - One of the greatest inventions that is often overlooked and under appreciated for its impact on the global economy.



The Humble Container

Revolutionized the world we live in today by facilitating international commerce and global manufacturing in a way that could have never occurred without the simple rectangular box.

Employment among cities, regions and countries have been impacted, which also plays into the politics and culture of each country across the globe to allow for efficiencies, specialization and expertise by region. ~intekfreight-logistics



Chassis Evolution

- Overall, intermodal chassis have evolved to become more standardized, technologically advanced, environmentally friendly, and safer.
- These advancements aim to enhance efficiency, reduce costs, and improve the overall intermodal transportation experience.
- Deep dive:
 - Chassis Choice
 - Standardization
 - Safety
 - Technological Advancements



Chassis Evolution

Ownership / Management

1. SSL Owned
2. Pool Management Companies
3. Fleet Owned
4. BCO Owned
5. Gray Pools

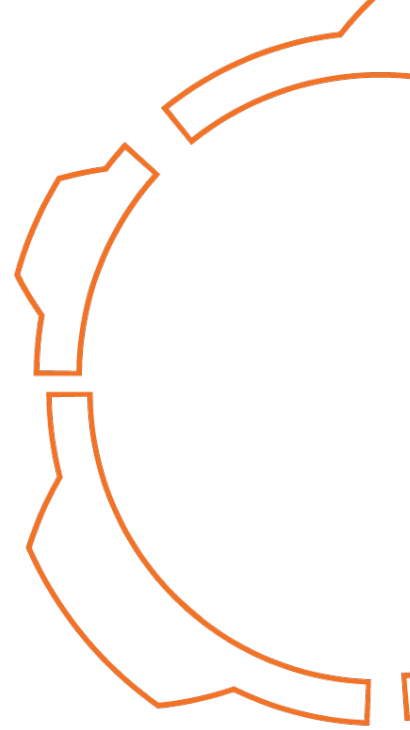


Chassis Evolution

Chassis Choice

Transport Topics reported that on February 6, 2023...

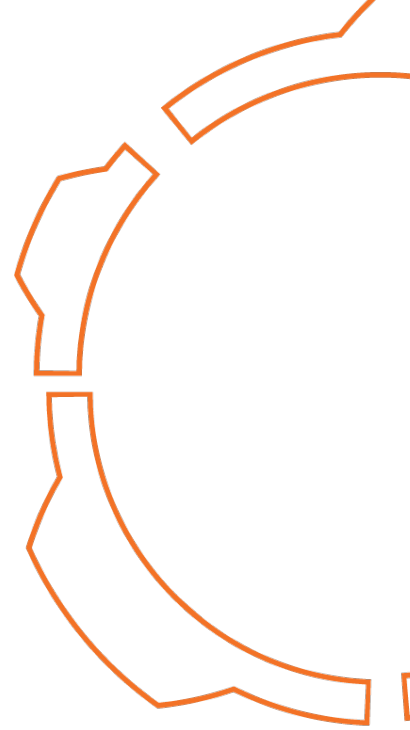
The Intermodal Motor Carriers Conference of American Trucking Associations has won a favorable judgment in its case against the Ocean Carrier Equipment Management Association and others in a dispute involving chassis choice for carriers that operate at maritime and inland ports.



Chassis Evolution

Standardization

1. Size/Type generally completely standardized
2. Useful consolidation of variable sizes
3. Improvements in weight, material strength, and strength-to-weight ratios
4. Lightweight



Chassis Evolution

Safety

- Anti-lock Braking System
- Electronic Braking System
- Tire-pressure monitoring systems (TPMS)
- Automatic Tire Inflation Systems (ATIS)
- Anti-sway systems
- LED lighting
- Markings
- Conspicuity tape and labels



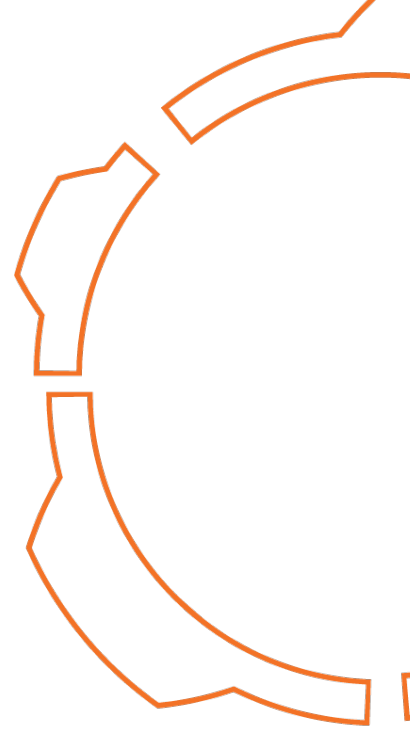
Chassis Evolution

Technological Advancements

Complete Visibility!

- Location – Telematics
- Onboard Safety & Maintenance Features - Telematics
- Status
 - Connected
 - Bare / Mounted
 - Loaded / Empty

Improved asset management, utilization, and profitability



Chassis Evolution

What's Next?

- Increased competition
- Commoditization
- Leveraging technology to address differentiation
- Improvements to tech installation and integration (OEM embedded)





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