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Thank You for Joining Us!

- This webcast will cover ...
 - A regulatory overview
 - Best practices in compliance
 - A case study in implementation
 - Question & Answer session
- You will be muted during the event.
- Please use the Q&A feature to send in questions. We'll try to answer them during the Q&A period if they are not covered in the presentation.
- The slides and recording will be posted within 7 days at: www.jjkeller.com/nptcinfo



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Required Electronic Safety Systems Tom Bray J. J. Keller & Associates, Inc.

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Antilock Braking System (ABS): §393.55

- Wheel sensors and processor detect wheel lock
- Brakes that are locked are "modulated" to prevent skidding and loss of control
- Required on:
 - Tractors as of March 1, 1997
 - Air-brake trailers as of March 1, 1998
- Must be functioning at all times





Antilock Braking System (ABS): §393.55 • Malfunction warning lights required • Tractor warning light on dash • Trailer warning light on dash required as of March 1, 2001

Trailer warning light on left rear corner of the trailer
 Checking ABS now part of annual inspection

• "Key on" test part of Level I and II roadside inspection

• If malfunctioning, a violation but not an out-of-service violation



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Electronic Stability Control (ESC): §571.136

- Pitch, roll, and yaw sensors determine when vehicle is becoming unstable
- Engine defueled and smart braking applications reduce speed
- Required on:
 - Most tractors as of August 1, 2017
- Currently no violation if it is not functioning



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ELDs: Part 395 and Appendix

- Required for drivers that must log and are not covered by one of the ELD exemptions
- · Must be getting data from the vehicle's ECM
- ELD must track driver's compliance with the HOS regulations suing vehicle data to determine when the driver is driving
- \bullet Technical standards found in Appendix A to Subpart B of Part 395



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ELDs: Part 395 and Appendix

- Most system have non-required options, including:
 - Instant communications/HOS updates

 - HOS compliance auditing
 Driver performance tracking, including:

 - Hard braking
 Idle time
 Fuel mileage





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Current Proposal

- · Automatic emergency braking

 - Proposal published July 6, 2023
 Ties into National Roadway Safety Strategy (safer vehicles)
- On the vehicle and functioning
- Update to ESC
 - Part of July 6, 2023, AEB proposal
 - Require it on more vehicles (any vehicle 10,001 or more)
 - · Require it be functioning
- Comments due by September 5, 2023



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Under 21 Pilot Program

- Electronic safety systems required
 - · Automatic manual or automatic transmission
 - Active braking collision mitigation system
 - Forward-facing video event capture system
 - Governed speed of 65 miles per hour (speed limiter)





Not Required, but Proposed Changes to CPDP

- Crash Preventability Determination Program (CPDP)
- Crashes that fit the eligibility standards and are found not-preventable are not used in carrier's Crash BASIC scoring
- Proposal would allow any crash to be reviewed if video footage shows crash as non-preventable
 - Currently, video can be used to support preventability determination for crashes that fit the eligibility criteria



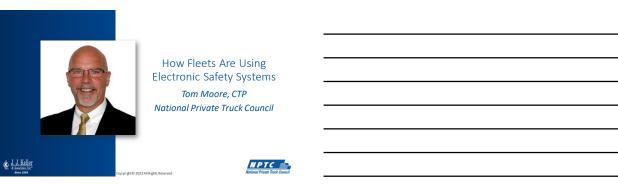
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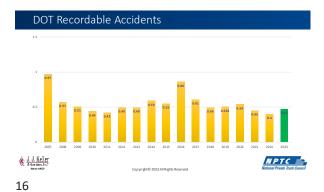


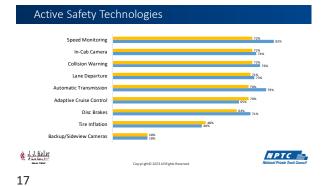
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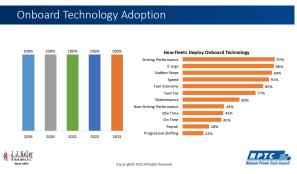


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Other Technologies

- Back-up Cameras/Proximity Sensors
- On-Board Weight Scales
- Liftgate Performance Monitoring
- Wheel-end and/or brake monitoring
- Light and Electrical Monitoring

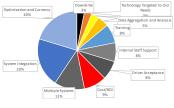


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Technology Challenges



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NPTC National Private Truck Council

Implementing Active Technology

- Safety culture
- Communication, education and training
- Data aggregation protocols
- Revisit metrics to determine relevance
- Review safety policies
- Re-evaluate staff responsibilities
- Coaching



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Technology Drives Behavior Changes

- Behavior changes are critical to ongoing success
- Coaching and training are the first and most important steps
- Having meaningful, actionable and timely data is essential
- Unfortunately, some just will not learn and take the coaching
- Once you have coached multiple times then they should not be surprised when corrective action is taken



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Technology Drives Accountability

- Certain behaviors are unacceptable, but the industry never had tools to prove
- Video, speed, engine telematics give us the evidence we need to hold people accountable
- People improve because they know data exists
- This flows over to all safety protocols, training, rules, and procedures



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Opportunities & Challenges

- Opportunity understand risk exposure like never before
- Amazing new opportunities to identify and correct unsafe behaviors
- Challenge avoid technology overload
- $\bullet \ \ \text{Challenge is developing management systems to}\\$
 - Ensure technology is used fairly and consistently,
 - Prioritize information,
 - Process data actionable reports, and
 - Ensure focused improvement most important action items.



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Norlene Gray, CDS, CTP Transportation & HR Safety Manager



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Brakebush Transportation, Inc.



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Brakebush Transportation, Inc.

- Corporate Headquarters -N4993 6th Drive Westfield, WI
- Plant Wells, MN
- Plant Irving, TX
- Cold Storage Grand Prairie, TX
- Plant Mocksville, NC
- Terminal Thomasville, NC
- Yard Charleston, MO



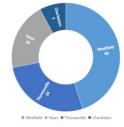


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Brakebush Drivers All Locations



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Safety Technology Currently used by BTI

Anti – Lock Brakes on Tractor and Trailer

Disc Brakes on Tractor and Trailer

Roll Stability

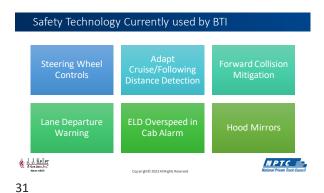
Tire inflation System on Trailer Pressure Monitoring System on Tractor

GPS Posted Speed Monitoring VS Actua Speed of Tractor

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Other Safety Technology BTI is Considering







DYNAMIC STEERING – 2 SEMI TRUCKS IN THE FLEET WITH THIS TECHNOLOGY ELECTRONIC MIRROR SYSTEMS

360 CAMERA SYSTEMS -CURRENTLY TESTING.

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Implementation and Communication of Technology Education – Why we are adopting it and what it will be used for. Policy – How the incoming information will be handled and who has access to it. Training – Training the back office and the drivers.



Policies to Handle the New Information

It is important to be clear who should be monitoring the information.

How will the information be handled.

Who has access to the information.

What are the expectation and outcome from using it. Review on a regular basis.



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Training

The office needs to know how to use it and who is monitoring it

Drivers need to know how to use it on their end and how the information is being handled. What is expected from them.

Everyone needs to know the policy.



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Opportunities





How can I use this the information to improve the business, safety and user experience.

Coaching opportunities.



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Coaching

It is important to coach a driver when unsafe habits are caught by technology.

Document coaching

Take steps in a written warning notice - Discipline if after coaching the behavior continues.

Follow your policy



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Technology is Always Evolving

- Keep an open mind when implementing new technology there is always a learning curve and understanding how to use it and the information it provides can take time.
- There will always be the next best thing out there.
 - Ask your self what do we want to accomplish.
 - Are we duplicating service.
 - See if you can test it.



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More Questions?



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Tom Moore, CTP
Executive Vice President
National Private Truck Council



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