

Active Safety Technologies

July 15th, 2015

Tom Moore
National Private
Truck Council

Active Safety Technologies

Tom Moore, CTP
Sr. Vice President
National Private Truck Council

NPTC
National Private Truck Council

J. J. Keller
& Associates, Inc.
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Introduction

- Industry Best Practices – Tom Moore, CTP
- Regulatory Background – Tom Bray, Senior Editor
- Fleet Perspective – Joe Laskowski, CTP
- Housekeeping issues:
 - You will be muted during the event.
 - Please use the Q&A feature to send questions us. We'll try to answer them during the Q&A period if they are not covered in the presentation.

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Truck Safety Facts

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Large Truck Involved Fatalities 2003 - 2011

Year	Fatalities
2003	5,036
2004	5,235
2005	5,240
2006	5,027
2007	4,822
2008	4,245
2009	3,380
2010	3,686
2011	3,757

Large Truck Involved Injuries 2003-2011

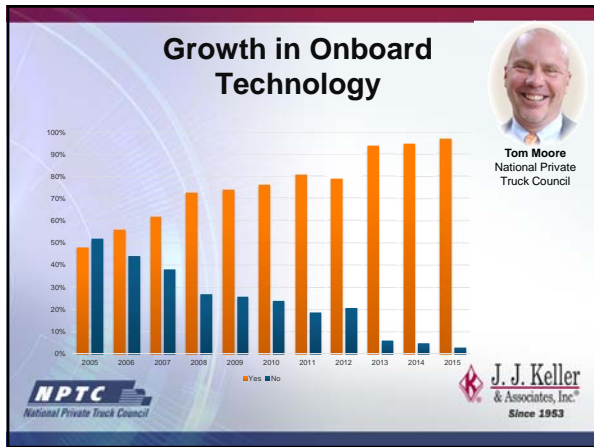
Year	Number of Injuries
2003	122,000
2004	116,000
2005	114,000
2006	106,000
2007	101,000
2008	90,000
2009	74,000
2010	80,000
2011	88,000

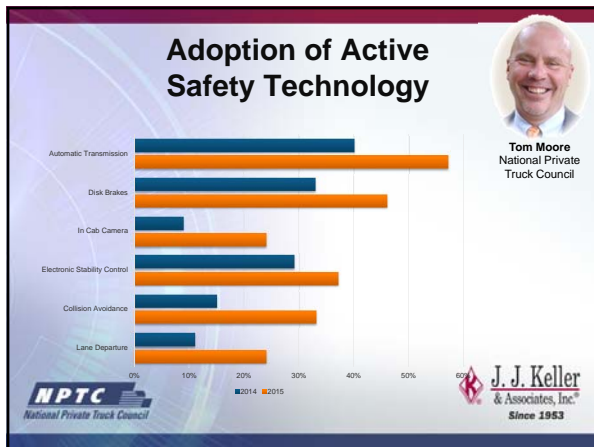
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FMCSA Active Research Initiatives

- <http://www.fmcsa.dot.gov/safety/research-and-analysis/active-research-projects>




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Collision Warning Systems

- 8,597-18,013 rear-end crashes could be prevented
- A property damage only (PDO) rear-end crash would cost \$122,650, an injury rear-end crash would cost \$239,063, and a fatal rear-end crash would cost \$1,056,221.
- The cost of purchasing and maintaining a FCWS ranged from approximately \$1,415 to \$1,843 per vehicle.
- When the cost/benefit calculations were completed, they determined that for every dollar spent, carriers would get \$1.33 to \$7.22 back




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Lane Departure

- Has potential to eliminate approximately:
 - 1,069-2,463 leaving the roadway crashes,
 - 627-1,307 SVRD rollover crashes,
 - 1,111-2,223 sideswipe crashes,
 - 997-1,992 opposite direction sideswipe crashes, and
 - 59-118 head-on crashes.
- With an average estimated cost for these types of crashes of \$100,150-\$196,958 for a PDO crash, \$135,096-\$455,936 for an injury crash, and a fatal crash cost of \$885,150-\$1,252,872, and a cost of \$765.00 to \$866.40 per vehicle, LDWS had a benefit of \$1.37 to \$6.55 for each dollar spent. The payback period was determined to be between 9 and 37 months.




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Electronic Stability Control



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- Estimated that between 1,422 and 2,037 combination vehicle rollover crashes in curves alone could be prevented
- Based on the average estimates of a PDO rollover crash costing \$196,958, an injury rollover crash costing \$462,470, and a fatal rollover crash costing \$1,143,018, these systems provided a payback in six to 30 months. The systems would return between \$1.66 and \$9.36 for every dollar spent.



NTSB Most Wanted List



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- To address vehicle factors, regulators must promote proper fleet maintenance and proven life-saving technology.
- Vehicle safety equipment and technology, such as collision warning technology, tire pressure monitoring systems, rollover stability control systems, and lane departure warning systems, should be mandated across the entire industry.
- Regulators should also develop performance standards for front and side underride protection systems to improve highway vehicle crash compatibility with passenger vehicles.



Regulatory Background



Tom Bray
J. J. Keller &
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Thomas Bray
Sr. Editor, Transportation Management
J. J. Keller & Associates, Inc.




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ABS

- **Antilock braking systems**
 - Senses wheel lock up and "modulates" brakes so vehicle stays under control when braking
 - Required under §393.55 for all air brake vehicles built after 1997/1998
 - Must be functional at all times




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ESC

- **Electronic Stability Control**
 - Use pitch and roll sensors, and selective braking to stabilize vehicle if edge of envelop reached
 - **Will be required on all new:**
 - > Three axle truck-tractors within two years
 - > Two-axle tractors and severe duty tractors within four years
 - **Will not require retrofitting older tractors**
 - Already required on cars and sold as option in trucks



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Speed Limiter

- **Heavy vehicle speed limiters**
 - Joint FMCSA/NHTSA rule
 - Speed would be set by rule
 - Ontario and Quebec already have such laws
 - Proposal expected 8/2015



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ELDs

- **Electronic Logging Devices**
 - Would take the place of paper logs and AOBDRs
 - Device must automatically capture "dataset" at specific times
 - Dataset and driver entries create record of duty status
 - Driver to provide officers today and last seven days
 - Final rule expected 9/2015


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Driver Distraction Regulations

- **Cell phones**
 - No using handheld cell phone when driving
 - "One touch" requirement
- **Texting**
 - No entering or reading alphanumeric text on a communication device when driving


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MedTrans LLC

**Active Safety Technologies:
The Fleet Perspective**



Joe Laskowski, CTP
Director, Fleet Safety & Compliance
MedTrans LLC



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Medline Industries, Inc.
Headquartered in Mundelein, IL



Joe Laskowski,
CTP
MedTrans LLC



Medline Industries, Inc.

- Nation's largest privately held manufacturer and distributor of health care and surgical products.
- Manufactures and distributes more than 350,000 products to hospitals, extended care facilities, surgery centers, physician offices, home care agencies and providers, and retailers.



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MedTrans LLC



Medline Industries, Inc.

- Recently named one of the nation's "Best and Brightest Companies to Work".
- *Chicago Tribune's* "Top Workplaces" award for the previous 4 years.
- Sponsor of the Nationally known "Pink Glove Dance" contest in support of Breast Cancer Awareness and Prevention.
www.pinkglovedance.com



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North America Operations

U.S. Locations - Medline Operations

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Medline's 3 Pillars of Success

Integrity
Leadership By Example
Open Two-Way Communication

Constant Improvement Customer Focused Care For Co-Workers

Taking Care Of Medline Taking Care Of Customers Taking Care Of Team Members

Medline's Core Values

Joe Lasowski, CTP
MedTrans LLC

The Private Fleet...

- MED TRANS LLC - Established March 2002
- Began with 25 power units - 25 Drivers
- Currently
 - 258 Tractors
 - 48 Trucks
 - 319 Trailers
 - 324 Team Members (Drivers)
 - Delivering ~ 62% of Sales

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Medline's Active Safety Technologies




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- Air Disc Brakes
- Lane Departure Warning System (LDW)
- Safety Direct
- EOBR
- Speed
- Rear-View Cameras
- Adaptive Cruise Control
- Stability Control



Air Disc Brakes





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MedTrans LLC




Air disc brakes provide:

- Surer, safer stops
- Require less maintenance
- Twice the lining life
- Four times the rotor life
- Virtually no brake fade
- Cut service time in half

All of which adds up to less truck downtime, and an improved return on investment.





Lane Departure Warning System



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MedTrans LLC

One in five truck fatalities are linked to unintended lane departures

- Lane Departure Warning (LDW) systems help reduce lane drift due to fatigue, distractions and unfavorable weather conditions.
- LDW systems detect when a vehicle drifts across a lane marking. When this occurs and the turn signal is not activated, the unit automatically emits a distinctive "rumble strip" or other warning, alerting the driver to make a correction. LDW systems work both day and night, and in most weather conditions where visibility is limited.



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Lane Departure System



Camera – mounted on the windshield



Dash Switch – enables construction mode



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Lane Departure Warning Systems




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LDWS Triggers

- Lane Departure Warning
- Excessive Lane Departure Warning
- Lane Change w/o Turn Signal
- LDW System Disabled
- Excessive Braking
- Excessive Curve Speed

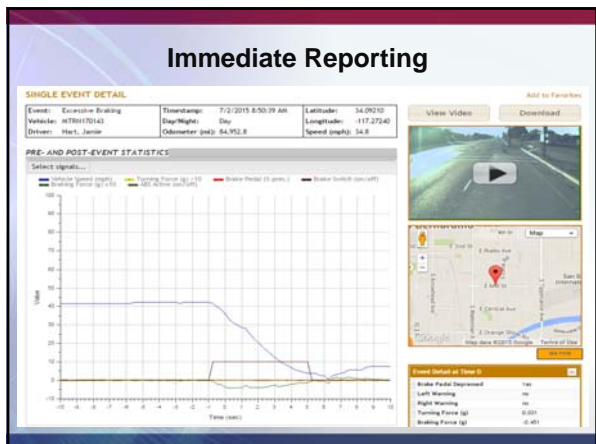


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Company/Division/Individual Reports

Division Report for MedTrans LLC

Division	Revenue	Profit	Loss	Net Income	Operating Income	Operating Loss	Net Operating Income	Net Operating Loss	Net Income	Net Loss	Net Income	Net Loss
MedTrans LLC	1,000,000	100,000	0	100,000	100,000	0	100,000	0	100,000	0	100,000	0

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EOBR



Home > eDriver Logs > Previous HCIS
Summary | 1 Day | 7 Day | 8 Day
7 Day Graph For Driver 4
Available Starting Date: Available On Duty Date: On Duty
Current Speed: 48.00 MPH Previous Speed: 48.00 MPH
8/10/15 1:27 PM

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EOBR Applications

- Driver Daily Logs
- Messaging
- Fuel Tax Reporting
- Monitor MPG
- Monitor Idling
- Monitor Speeding
- Automated Billing
- Onboard Event Recorder
- GPS Tracking
- Electronic DVIRs

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Reason for Speed Monitoring

- Managing speed on side roads is far more important than on Interstates
- 59% of all large truck travel in US happens on non-Interstate roads.
- Large truck crashes on side/secondary roads occur at nearly three times the rate of crashes on Interstates.

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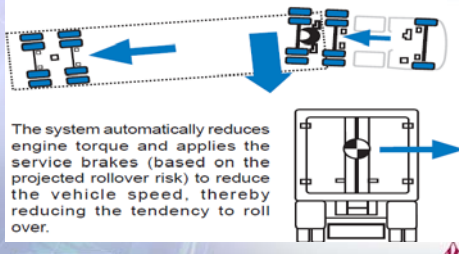
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Advanced ABS with Stability Control



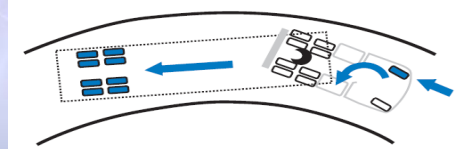
The system automatically reduces engine torque and applies the service brakes (based on the projected rollover risk) to reduce the vehicle speed, thereby reducing the tendency to roll over.

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Yaw Control Systems



Yaw Control system reduces engine throttle and selectively applies brakes to reduce the tendency to jackknife.

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Collision Avoidance Systems

According to the National Highway Traffic Safety Administration (NHTSA), on average 2-3 rear-end collisions involving heavy trucks occur somewhere in the U.S. every hour.

When the distance between a truck and the vehicle they're following starts to close, the system provides the driver following distance alerts and, if necessary, will apply the brakes to help the driver potentially avoid the collision, or help reduce its severity.

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**Distracted Driving
Zero Tolerance**

- Medline is taking the commitment to improve highway safety and reduce distracted driving to the next level.
- **ABSOLUTELY NO CELL PHONE USE OF ANY TYPE WHILE OPERATING A MEDLINE VEHICLE. THIS INCLUDES HANDS-FREE DEVICES.**



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MedTrans LLC





Make Good Use of the Data


- Collect and process
- Assign meaning to the collected data by:
 - Analyze the data – Create Reports
 - Distribute – Managers – Dispatchers - Drivers
 - Publish – Post Reports
 - Discuss – One-on-One with the drivers/worst offenders
 - Assign Accountability – Discuss ways for Improvement
 - Follow-up – Compare week to week reports
 - Compliment and praise for a job well done



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MedTrans LLC



Question & Answer Session





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National Private
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J. J. Keller &
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Joe Laskowski, CTP
MedTrans LLC

Please continue to submit
your questions.



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Thank you for participating!

Join us for our next webinar series:

Predictive Safety Analytics
Thursday, July 16, 2015 @ 10AM Central Time

Visit www.jjkeller.com/nptcinfo for more information



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