

Maintenance & Repair Committee Meeting

Monday, September 11, 2023

8:00 – 9:00 AM

Regency Ballroom ABC

Hyatt Regency Long Beach, CA



Agenda

I. [8:00 AM to 8:10 AM] Call to Order

- Welcome and Introductions
- Housekeeping and Safety Review
- Antitrust Guidelines and
 - Determination of Quorum
- Approval of May 9, 2023, Meeting Minutes

Christopher O’Hea, C & K Trucking, Chair
IANA Staff

Marc Blubaugh, Counsel, Benesch, Friedlander,
Coplan and Aronoff
Bill Fluke, Columbia Group, Vice Chair

II. [8:10 AM to 8:40 AM] Task Force & Working Group Reports

- Damage Prevention Outreach Program Task Force
- Preventative Maintenance Task Force
- Photographic Evidence Working Group

Andrew Knouse, Norfolk Southern
Bill Fluke, Columbia Group
Ed Smith, Webb Wheel Products
Mark Smith, FYX Fleet Roadside Assistance

III. [8:40 AM to 8:45 AM] Old Business

Chair/Vice Chairs

IV. [8:45 AM to 8:55 AM] New Business

- Electronic Chassis Inspection Data
- IANA Website and Dashboard

Chair/Vice Chairs
IANA Staff

V. [8:55 AM to 9:00 AM] Housekeeping and Adjourn

Chair/IANA Staff

Call to Order

- Welcome
- Reminder of expectation for Committee members
 - Meetings include deliberation of issues, education, and discussion of recommended practices
 - Solicitation of business is not allowed during meetings
 - Members must abide by antitrust guidelines
 - Actively participate in Committee
 - Committee participation is reviewed throughout the year

Housekeeping

- Turn Cell Phones to Vibrate or Off
- **Please** No Side Bar Conversations
- When Speaking
 - Use a Microphone
 - Identify Yourself and Company Affiliation



Safety Briefing

- Current Location:
 - Hyatt Regency, Regency Ballroom ABC
 - 200 S. Pine Avenue, Long Beach, CA 90802
- Hotel Security:
 - Office on ground level
- 911 Assignment:
 - Contact Hotel Security, Dial “55” from any Hotel Phone
 - Primary?
 - Secondary?
- AED Assignment:
 - Contact Hotel Security, Dial “55” from any Hotel Phone
 - Primary?
 - Secondary?
- First Aid Kit Assignment:
 - Contact Hotel Security, Dial “55” from any Hotel Phone
 - Primary?
 - Secondary?

Safety Briefing - Continued

- CPR Assignments:
 - Primary?
 - Secondary?
- Evacuation Assignments:
 - Primary?
 - Secondary?
 - Evacuation Routes – primary and secondary
 - Rally point:
 - Grassy area across from main hotel entrance
 - Chairs pushed in - **Avoid tripping hazards**
- Fire extinguishers:
 - Just outside the Regency A entrance.
- Drills scheduled or planned for the day


- Antitrust Guidelines
- Determination of Quorum
- Approval of May 9, 2023, Meeting Minutes



Task Force and Working Group Reports



IANA
INTERMODAL ASSOCIATION
OF NORTH AMERICA™



Damage Prevention Outreach Program Task Force

Andrew Knouse, Norfolk Southern

Objectives

- Raise awareness and share information regarding preventable chassis damage with stakeholders involved in moving, storing and maintaining chassis
- Develop presentation tools and resources, which may be utilized by IANA members during local outreach events
- Materials to highlight proper use and handling of intermodal chassis and the operational and safety benefits of doing so

Deliverables and updates since May

- Supervisor checklist/audit form
- Informational resources for daily briefings
- Impacts of nose loading
- Tire Skid Flat experiment

Audit form and informational excerpts

Damage Prevention Audit

Intermodal Equipment

Audit Items Checklist

Gate

1. Are units properly inspected for damage at ingate?
2. Using approved appliance for checking tires and visually checking all tires?
Tire thumper and rolling tires
3. Drive lanes kept clear of debris/tripping hazards?

Loading

4. IBC double stack guides or "flippers" set to proper position for container?
5. Are safe loading / unloading procedures for railcars being followed?
6. Proper mount/dismount of box to chassis from train or to train. No nose loading!
7. Are cranes operating correctly to ensure safe loading?

Trailer Equipment

8. Is spotter Driver lifting 5th wheel to adequate height?
9. Is a tug test being performed?

Is a tug test being performed?

BRAKE SKID

APPEARANCE

Localized spot of excessive wear across the tread face that may extend into the casing. Surface texture may show circumferential abrasion marks from tread sliding on pavement, but surface may have since worn smooth. Usually exhibited on both tires in a dual assembly.

PROBABLE CAUSE

Aggravated by: new brakes (high-friction, not worn-in), malfunctioning and/or unbalanced brake system, aggressive use of brakes, frozen brakes, driver abuse such as the use of only trailer brakes to stop a vehicle, and unloaded vehicles. (Continued below.)

If all trailer tires exhibit brake skids, there is a high probability that the conditions were the result of driver abuse and/or aggressive use of brakes. However, they may also be caused by a catastrophic loss of the supply line air pressure or moving this equipment before the emergency brakes are fully released. When only tires on one wheel-end are brake skidded, it is most likely due to mechanical issues such as brake component failure, improper maintenance of wheel-end brake components, improper installation of brake system components, and/or shoes frozen to the drum.



TIRE WEAR — TRAILER AXLE TIRES

Impacts of Nose Loading – Keepers/Safety Locks

Issue	Impact
Front pins left engaged at time of container loading	Container slid into front bolster during loading process impacting front locking pins
Chassis damage and improper container securement during loading process	Broken/Missing mechanisms, containers on top of pins
Average expense is low (pin securement latch) but frequency high	<ul style="list-style-type: none">• Estimated 300k damage events at cost of ~\$5.2m over the last 12 mo. for <u>domestic chassis</u>• Does not include damage caused to front bolster, gooseneck or landing gear• More study needed to estimate industry impact to marine chassis
Increase roadability and flip events	Negative driver experience and terminal efficiency
Increase chassis out of service counts on terminal	Unnecessary impact to M&R resources
Increase possibility of chassis leaving terminals without proper container securement	Raises safety concerns

Nose Loading Process



Chassis trackside with front pins engaged



1. Container angled down on chassis



2. Container forced down and slid until impact with front bolster *



3. Chassis lifted to confirm securement



4. Rear of container placed on chassis and then front of chassis placed to ground **

* Damage occurs to front pins, bolster and landing gear

** Additional damage occurs to the landing gear

Impact of Nose Loading

- Chassis mounted on pins requires a flip or container reset if missed and taken on the street is not properly secured and over height
- Bent and broken components require a trip to roadability or a flip



Container mounted on pin



Bent or broken pin securement



Broken/missing pin and housing

Impacts of Nose Loading

Challenges / Questions

No industry best practices when front pins should be released for mounting inbound loads

- When driver tenders the load?
- What is the expectation removing zip ties?
- With terminal operator at track side?

Documented process of driver responsibility not easily accessible or may not exist

- Based on word to mouth
- Different process based on geography
- How do processes get revised/communicated

More driver roadability events

- Damage caused trackside on inbound load

Lack of incentive to change process

Is there a lack of training with terminal operators?

- What is their responsibility?
- Are they aware of the impact?

Belief that nose loading is most efficient way to load containers to chassis

- Currently not done at terminals with wide span cranes
- Negative impact terminal efficiency due to more roadability and flip events

Next Steps



Establish industry best practices to keep front pins not engaged at time of container mounting



Develop and publish a standard for driver responsibility at time of load tender

- Find consistency between terminals
- Identify the exceptions



Educate terminal operators of their responsibility

- Last resource to ensure pins are pulled



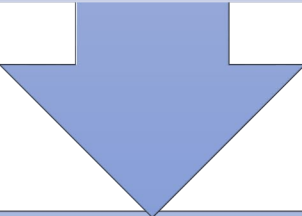
Allow IEPs to engage with terminals to help provide visibility and accountability



Assign ownership of the expense to the party responsible for the damage

Tire Damages – What does it take to skid flat a tire?

Tested scenarios:		
Bare Chassis	Chassis mated with empty container	Chassis mated with loaded container



Locked a single wheel end and dragged:				
15'	50'	100'	200'	300'

Situation 1: Bare chassis with locked brakes (estimated 7,8400 lbs.)

Tire location	Distance	Starting tread depth	End tread depth	Tire location	Distance	Starting tread depth	End tread depth
ROF	15	15/32	15/32	RIF	15	8/32	8/32
ROF	50	15/32	15/32	RIF	50	8/32	8/32
ROF	100	15/32	14/32	RIF	100	8/32	8/32
ROF	200	15/32	14/32	RIF	200	8/32	7/32

Test 2

Tire location	Distance	Starting tread depth	End tread depth	Tire location	Distance	Starting tread depth	End tread depth
ROR	200	16/32	14/32	RIR	100	16/32	13/32
ROR	300	16/32	13/32	RIR	200	16/32	12/32







Random 600' post drag observation

Tire location	Distance	Starting tread depth	End tread depth
LOF	600	6/32	3/32
LIF	600	10/32	3/32
LOR	600	6/32	3/32
LIR	600	10/32	3/32
ROR	600	9/32	0/32
RIR	600	8/32	0/32
ROF	600	5/32	0/32
RIF	600	4/32	0/32



Situation 2: Mated chassis with an empty steel container with locked brakes (estimated 17,800 lbs)

Tire location	Distance	Starting tread depth	End tread depth	Tire location	Distance	Starting tread depth	End tread depth
ROF	50	10/32	9/32	RIF	50	10/32	9/32
ROF	100	10/32	8/32	RIF	100	10/32	8/32
ROF	200	10/32	7/32	RIF	200	10/32	7/32





- **Situation 3:** Mated chassis with a load steel container with locked brakes
 - Estimated 72,190 lbs.
 - Could not get tires to skid
 - All four wheel-end brakes were engaged

- **Conclusion:**

- A chassis mated with an empty container will skid flat a tire at a faster rate than a bare chassis
 - Loaded containers, especially heavy loads, are less likely or not likely to skid flat, maybe wear out brakes faster than other scenarios.
- The amount of observations does not allow the team to claim any statistical significance to these observations
- These findings are simply what the team observed during this limited experiment
- We challenge other IEPS to replicate the experiment

Next Steps

Continue to refine and collect documents to be used for training and education

Publish material with IANA for use by all

Explore the possibility of defining SOP for staging and loading chassis properly to mitigate damage

Thank You to the Members

- Brian Bellan, Georgia Ports Authority
- Ryan Bivinetto, BlackBerry Radar
- Ron Cordova, Zonar Systems, Inc.
- Ben Evans, CIE Manufacturing
- Chris Gates, Clarience Technologies
- Nate Graglia, Wallport Transit Xpress, Inc.
- Andrew Knouse, Norfolk Southern Corporation
- Calvin Lin, Ventra Technology
- Tyler Lippincott, J.B. Hunt Transport Services, Inc.
- James Niccum, Rail Logistics, Inc.
- Thomas Novak, Rail Logistics, Inc.
- Chad Peterson, CPKC
- Pete Russo, Decisiv, Inc.
- Brad Ryckert, SKF USA Inc. Vehicle Service Market
- Jimmy Scardo, Norfolk Southern Corporation
- Eric Snyder, DCLI
- Mike Wells, DCLI
- Steve Williams, Dayton Parts, LLC



Preventative Maintenance Task Force

Bill Fluke, Columbia Group
Ed Smith, Webb Wheels Products

Thank You to the Members

- Al Anderson, Peterson Manufacturing Company
- Ryan Bivinetto, BlackBerry Radar
- James Caudill, South Carolina Ports Authority
- Ron Cordova, Zonar Systems, Inc.
- Jeffrey Dudenhefer, North American Chassis Pool Cooperative
- Bill Fluke, Columbia Group
- Carl Francis, Consolidated Chassis Management, LLC
- Chris Gates, Clarience Technologies
- Billy Heath, TRAC Intermodal
- Brian Herrington, SAF-HOLLAND
- Stevenson Kemp, South Carolina Ports Authority
- Andrew Knouse, Norfolk Southern Corporation
- Brian Martin, Autocar Truck
- Christopher Meyer, TRAC Intermodal
- Kent Musick, Pratt Intermodal Chassis
- Cory Nelson, Milestone Equipment Holdings
- Thomas Novak, Rail Logistics, Inc.
- Frank Puciul, SAF-HOLLAND
- Emilio Cerda Rico, Pressure Systems International, Inc.
- Michael Rolling, FlexiVan
- Rob Rowe, B-H Transfer Co.
- Mark Schmidt, North American Chassis Pool Cooperative
- Richard Searle, TRAC Intermodal
- John Shelton, STEMCO
- Ron Smejkal, TRAC Intermodal
- Ed Smith, Webb Wheel Products, Inc.
- Nicholas Smith, Union Pacific Railroad Company
- Marty Summers, Consolidated Chassis Management, LLC
- Kellie Taub, Pressure Systems International, Inc.
- Stephen Williams, Dayton Parts, LLC
- Charles Yaggy, REMPREX, LLC
- Pete Young, Rail Logistics, Inc.



Photographic Evidence Working Group

Mark Smith,
FYX, Fleet Roadside Assistance

Thank You to the Members

- Brian Bellan, Georgia Ports Authority
- Ryan Bivenetto, BlackBerry Radar
- Tim Farrell, Intermodal Cartage Co., Inc.
- Brooke Frerichs, Union Pacific Railroad Company
- Stefanie Fyfe, ContainerPort Group, Inc.
- Venus Johnson, Ports America
- Stevenson Kemp, South Carolina Ports Authority
- Andrew Knouse, Norfolk Southern Corporation
- Richard Lammers, Union Pacific Railroad Company
- Calvin Lin, Ventra Technology Inc.
- Angelina Mercado, TRAC Intermodal
- Holly Middleton, Norfolk Southern Corporation
- Timothy Moore, CSX Intermodal Terminals, Inc.
- Kent Musick, Pratt Intermodal Chassis
- Anthony Noles, Dorsey Tire Company, Inc.
- JJ Pascente, Legend Trucking, Inc.
- Albert Perez, BNSF Railway
- Frank Puciul, SAF-HOLLAND
- Ron Smejkal, TRAC Intermodal
- Mark Smith, FYX, Fleet Roadside Assistance
- Bill Traub, P & B Intermodal Services, Inc.
- Stephen Williams, Dayton Parts, LLC
- Pete Young, Rail Logistics, Inc.



Old Business

Chair/Vice Chairs



New Business

Electronic Inspection Chassis

Data

Chair/Vice Chairs



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New Business

IANA Website and Dashboard

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Housekeeping and Adjourn



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