Intermodal Equipment Maintenance
Current and Future State

5th Annual CCIB Intermodal Seminar
October 5, 2011 - Tinley Park, Illinois

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Agenda

Problem Statement
• Cost of damaged equipment
• Current parties involved in M&R
• M&R vendor structure
• Assigning accountability

Issues inside the gate
• Impact by terminal operators
• Inspection process’s

Issues outside the gate
• Motor Carrier – Railroad relationship
• Roadability – Impact to Industry

Summary / Future
• Solutions
• Questions & Answers
“Got Damage?“
Problem Statement

Intermodal inspections and the repair of containers, trailers, and chassis do not meet the requirements of US Railroads’ internal and external customers.
Key Drivers of Performance - Inadequacies

**Inspections:**
- Quality/Consistency of Inspections
- Motor Carriers / Railroads/Facility Operators

**Repairs:**
- Lack of Safety Management by Repair Vendors
- Repairs not “Work Order Driven” – “Free Flow”
- Lack of daily Supervision/Management /Audits
- Improper repairs
- Many repairs not made immediately after actual damage occurs but only when reported by inspection at a later date

**Costs:**
- High Cost of Inspections and Repairs
- High Absorption/Low Rebillable Damage

**Industry Organizational Structure:**
- Many Companies with differing disciplines

**Facility Operators – Terminals**
- Design not always conducive to inspections and repairs
- Congestion resulting in Damage

**Damage Claim Assessments:**
- Lack of Understanding of Owners and Damage Repair Rules
- Various M&R Policy/Rules by Companies
- Absorption of Damage Costs by Incorrect Party
- Over the Road Repair Policies/Administration
- Determination of Damage Responsibility not always supported by Empirical Data
- Misuse of “AAR Codes” do not support the accurate match and merge process for determining damage accountability
- Street Turns – Liability
- Cross-Town Drayage – Accountability

**Equipment Utilization**
- Loss of Equipment Availability

**Driver Productivity**
- Delay/Waiting Time by Motor Carriers for Repairs/Flips
- Disputing Damage vs. Defects at Gates

**Equipment Design**
- Requirement: Low weight but able to support heavy loading
Maintenance and Repair Costs ($ Million)  
US Railroads

Non-Damage, $200  
Damage, $100

Rebilled, $25
Absorbed, $75

Non-Damage, $200  
Damage, $100

Side Panel, $11.0  
Side Posts, $17.0  
Tires, $29.0  
Other, $16.0  
Landing Legs, $6.3  
Main Frame Rail, $6.3  
Roof, $5.2  
Top/Bottom Rail, $3.6  
Chassis/Bolster, $2.9  
Sub Frame, $1.9
Multiple Direct and Indirect Parties
Complex Relationships

- Customers
- OSHA
- CCM
- CCIB
- FMCSA
- Gate Inspection Co.'s
- Chassis Leasing Co
- Facility Operators
- State DOT
- AAR
- AAR
- Cal BIT
- Suppliers
- OTR Service M&R Vendors
- M&R Vendors
- Water Carriers
- Motor Carriers
- Railroads
- Manufacturers
- IT M&R Co's
- Equipment - M&R
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M&R Vendors – Contract Structure / Demands

164 M&R Vendors in USA today

- Contract Structure –
  - Matrix Pricing - Time/Parts standards
  - Hourly Labor – Parts plus Mark Up

Billing Requirements - AAR

- 2,927 Combination AAR Codes
- 35 AAR Why Made Codes
- 427 AAR Job Codes
- 19 AAR Condition Codes
- 37 AAR Location Codes

M&R Vendor Management

- Work Orders vs. “Free Flow” Repair process
- Lack of Cohesive Audit Process
- Safety Management Lacking Supervision
Damage – In Terminal – Outside Terminal

“Who Done it?”

Technology has the ability to close the Information gaps and improve inspections to determine correct liability
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*Terminal Facility Impact - Process/Design/Resource*

- Terminal Congestion
- Inspection Lane Design
- Track Side Parking
- Stacking - Chassis/Containers
- Roadability Repair Area
- Lighting
- Drive Lanes
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*Inspection Process/Procedures/Policies*

- Roadability/Loadability
- AGS Gates – Limitations
- Standard Gates – Human Error
- Damage vs. Defect Definitions
- FMCSA Motor Carrier Inspections
- IEP’s Policies/UIIA I/C Agreements
- Inspectors Qualifications
- Tire Inspections
Gate Inspections: Manual Gates

• Requires Less Capital
• Tire Damage can be inspected

• Longer processing time
• Gate Inspectors qualifications/performance
• Legibility issues
• Requires transfer from paper to computer (non Hand Held Computers)
• Inspection adversely affected by weather
• Inspectors require dual accountability
• Data Reporting/Inventory Control
• Damage Inspection
• Two person accountability – No secondary review tool – AGS Image
Gate Inspections: AGS Gates

- Eliminates most Damage Disputes
- Reduces Gate Transaction Time
- Reduces Human Error
- Provides Web Access Images

- Initial Capex Costs
- Tire Inspection Limited
- Images are Not Shared by Between IEPs/RRs/Facility Operators
- Higher Hardware and Maintenance Costs
- Expensive Technology Enhancements
Motor Carrier – Railroad Relationships/Satisfaction

Motor Carriers are the face of your customers

P’s have leverage against C’s to assess damage claims

ICSRA Roadability requirements – Limited success

Pre-Ingate Reporting
Roadability

Impacts to M&R – Chassis

Access Limited(*)

June 2010 to Sept 2011

2.8 mil Total Reports (**) - 45,194 RCD Reports = 1.6% Exceptions

Outbound MC Pre-inspections – Roadability Data Not Available

* Based on IANA Data
* DVIR No Defect Suspension by FMCSA
**Summary**

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<th>Managing Inspection and Repairing Equipment is Difficult</th>
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<td>• Damage reporting is counter-intuitive</td>
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<td>• MC’s concern for being billed for damage they report</td>
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<td>• Quality inspection personnel are difficult to find/maintain</td>
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<td>• Technology is expensive and will take years to implement</td>
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<td>• Leverage of repair vendors by IEP’s can result in less than satisfactory repairs/invoicing/management</td>
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<th>Costs to Inspect and Maintain Continues to Increase</th>
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<td>• Inspections, processes and technology for determining responsible party needs improvement</td>
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<td>• Tire damage and responsibility assessment remains a challenging industry opportunity</td>
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<td>• Tire costs continue to increase due to rubber and production availability and manufacturing costs</td>
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<th>Equipment issues remain paramount</th>
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<td>• Roadability has had only minimal impact on chassis inspections and or repairs</td>
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<td>• Customers are insisting on quality equipment</td>
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<td>• Cost of new Equipment continues to escalate – Utilization is key in maintaining equipment costs</td>
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<th>Industry (Dis)harmony</th>
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<td>• M&amp;R remains divisive issue between Motor Carriers and IEPs</td>
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<td>Technology/Capital</td>
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<td>----------------------------------------------------------------------------------</td>
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<tr>
<td>• Use of Steel vs. Aluminum Containers</td>
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<td>• LED Lights - Securement Systems</td>
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<td>• Additional AGS Sites</td>
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<tr>
<td>• Tires - OCR Images</td>
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<tr>
<td>• Terminal Design – New and Redesigned Terminals</td>
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Questions?