

DAMAGE PREVENTION & LOADING SERVICES

UPDATE

SPRING 2020



DPLS | SAFER AT HOME

Recent events have temporarily suspended DPLS field activities, but we are actively pursuing strategies to return as soon as is safe and practical. Read on to learn how we are utilizing this time to improve our products and services.

TTCI Maintains Full Operations During COVID-19 Pandemic

Transportation Technology Center, Inc. (TTCI) remains fully operational in support of our customers and the industry. Our testing facility and headquarters in Pueblo, CO is following all CDC guidelines and taking strict precautions to protect the health and safety of staff and contractors while ensuring continued service. Mission-critical staff are operating on-site and other TTCI employees are addressing client and industry needs remotely. TTCI business functions remain uninterrupted, including customer testing projects and our support of the AAR's Strategic Research Initiatives. As the situation continues to evolve, we will adjust our actions accordingly to help limit the spread of the virus and do our part in helping to protect our valued employees and customers.

As a customer option, we are offering "virtual" testing in lieu of onsite customer representation. For projects that do not absolutely require customer presence, we are experimenting with video calls and similar options to verify testing is conducted to the customers specifications. If, however, you feel it is essential to be present, we can accommodate. Contact us at DPLS@aar.com for more information.

2021 DP&FC Conference

Add the 2021 DP&FC Conference to your calendar for an event not to be missed!

The annual DP&FC Conference has been rescheduled for **June 7-10, 2021**. Canadian National Railway will continue as the conference host and the event will be held at the Sheraton on the Falls, Niagara Falls, Ontario. The conference agenda is under development and will emphasize Canadian rail transportation and interchange, forestry and metal products, and will feature railroad "fireside" chats. Conference registration, hotel details, and vendor reception information will be available Spring 2021.



DP&FC Committee Summer Webinar

The DP&FC Committee will be hosting an open online summer meeting in July 2020. The Committee meeting will cover new publications, testing updates, and topics of interest to the damage prevention industry. Meeting details and registration will be provided in June 2020.

DP&FC Committee Update

In January 2020, **Ben Cates (CN)**, was confirmed as the new chair for the Damage Prevention and Freight Claim Committee. Due to the postponement of the annual conference, Ben will continue to be the committee chair until the conference is held in summer 2021.

Mitch McDonald (CSX) will continue to be the Vice-Chair until summer 2021. The Committee has continued to hold monthly conference calls, review requests for testing, and approve new and revised load securement methods. The Committee approved seven new field trials from winter 2019 through spring 2020.

Since winter 2019, the Committee has approved 10 new or revised loading patterns and securement methods. The revision to Closed Car Loading Guide Part 2 – “Best Practices for Loading Roll Paper in Railcars” was completed and published in December 2019. This revision incorporated 28 GIS update documents. GIB 9 – “Product Performance Profile for Pneumatic Dunnage” was also revised in February 2020.

Online DP&FC publications now includes separate tabs for closed car loading publications and intermodal loading publications. The tab for intermodal loading documents offers an improved layout and additional information on intermodal loading, including a new section on flexitanks.

New and Revised Loading Patterns and Securements Methods 2019 – 2020

- **GIS 828** – 44-in. Diameter Roll Paper Loaded in 50-ft. Cushioned Boxcars using Horizontal Airbags (12/19)
- **GIS 829** – 39-in. Diameter Roll Paper Loaded in 50-ft. Cushioned Boxcars using Vertical Airbags (12/19)
- **GIS 830** – 72-in. Diameter Roll Paper Loaded in 60-ft. Cushioned Boxcars with 16-ft. Double Plug Doors Secured with Double-S Straps (2/20)
- **GIS 831** – Metal Intermediate Bulk Containers with Disposable Inflatable Dunnage Bags and Lengthwise Void Fillers – GoodPack USA (3/20)
- **GIS 832** – 47-in. Diameter Roll Paper Loaded in 60-ft. Cushioned Boxcars (4/20)
- **GIS 833** – Double Layer Loads of Hazardous or Nonhazardous Materials Secured with Cordstrap® Barriers in a 20-ft. Container (4/20)
- **GIS 834** – Hazardous or Nonhazardous Loads Secured with Cordstrap® Barriers in 40-ft. Containers (4/20)
- **GIS 835** – Double Layer Loads of Nonhazardous Materials Secured with HFlash RHS Securement System in a 20-ft. Container (4/20)
- **GIS 836** – Wood Bin Containers for Shipping Liquid or Paste Products in Boxcars (5/20)
- **GIS 837** – 54-in. Diameter Roll Paper Loaded in 50-ft. Boxcars (5/20)

All new approved loading patterns and methods can be found online:

<http://www.aar.com/standards/damage-publications.php>

<http://www.aar.com/standards/IntermodalLoadingPublications.html>

For questions or additional resources please contact dpls@aar.com

DP&FC Committee Technical Advisory Group (TAG) Update:

The Quality Lead Team (QLT) on Prevention of Damage to Roll Paper, the Intermodal Ride Quality TAG, and the Freight Claim TAG have all continued to hold regular conference calls to address their assigned topics. In March 2020, the QLT was tasked with revising and improving documentation for pulp bale load securement. The Intermodal Ride Quality TAG continues to work on substantial revisions to both Circular 43 and the Intermodal Loading Guide.

The Bulk Bin TAG gathered information on wood bulk bins and how to improve documentation on bulk bins. They created additional information for wood bulk bins to be added to Close Car Loading Guide Part 7 – “Minimum Loading Standards for Intermediate Bulk Containers in Closed Cars,” and this information was published in the new GIS 836 – “Wood Bin Containers for Shipping Liquid or Paste Products in Boxcars.” Having completed the assigned task, the group has ended its role as an active TAG. Thank you to the members of the Bulk Bin TAG for their time and efforts on this project.

Open Top Loading Rules Committee (OTLRC) Update:

The OTLR standards are revised frequently and all current OTLR manuals are available online as a free download so that the entire industry has access to the most recent rules and figures at all times.

OTLR Volume	Standards Revised since last Publishing	Standards Revised in 2019	Last Release	Next Release	Number of Pages
1. General Rules Governing Loading of Commodities on Open Top Cars	107	15	May 2017	May 2020	268
2. Metal Products Including Pipe	314	31	May 2017	May 2020	398
3. Machinery, Heavy Components, and Misc. Commodities	59	14	May 2017	May 2020	198
4. Archived Rules and Figures	Archive				
5. Forest Products and Misc. Building Materials	147	25	May 2017	May 2020	118
6. Military Equipment and Materiel	157	21	May 2017	May 2020	216
7. Open Top Trailers and Containers for Rail Transport	12	0	May 2017	May 2020	138

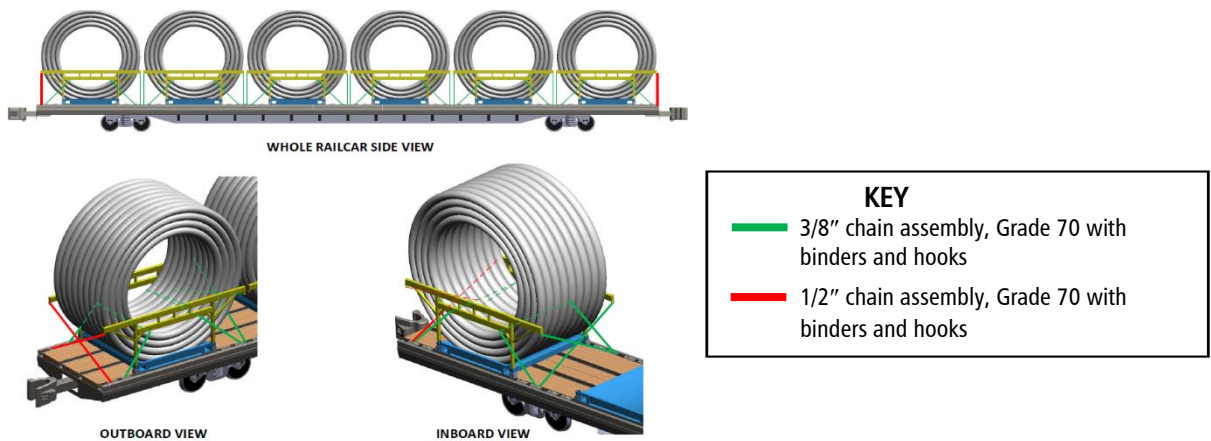
OTLRC TAG update:

Open Top Loading Rules Committee (OTLRC) has created the following TAGs to promote the safe movement of trains carrying commodities in open top cars, trailers, and containers by maintaining a set of standards specifying uniform and economical methods of loading and securement for the entire scope of eligible products:

- **Rules and Figures (R&F) TAG:**
 - Reports to OTLRC , all edits and decisions made by the full committee.
 - Consists of representatives from NS, BNSF, CSX, and RAC.
- **Section 3, Blocking Patterns TAG:**
 - Reports to OTLRC and develops/reviews blocking patterns – road grading and road-making machinery nailing patterns with reference to Section 3 and others, if needed.
 - Consists of representatives from CSX (lead), BNSF, and CN.
- **Section 3, Fig. 1-D (Transformers on Flatcar) TAG:**
 - Reports to OTLRC and TAG addressing shear analysis on lateral securement associated with base contact height.
 - Consists of representatives from BNSF (lead), CP, NS, and BNSF Logistics.
- **Section 5 TAG:**
 - Reports to OTLRC and works on Section 5, “Forest Products and Miscellaneous Building Materials” manual.
 - Consists of representatives from CSX (lead), CN, and RAC.
- **Pipe loading (Section 2) TAG:**
 - Reports to OTLRC and works on Section 2, “Metal Products Including Pipe” manual as needed.
- **Centerbeam Cable TAG:**
 - Reports to OTLRC and is developing a poster showing proper cable securement on empty centerbeam cars. Will be distributed to unloaders to raise awareness of centerbeam cable securement
 - Consists of representatives from CN (lead), TTX, and RAC.

Recently Initiated OTLR Field Shipments Tests:

- **LT 1288:** SSAB: Wide plate with strap protectors provided by the sleeve that is placed over the strap at any point with the vertical edge of the plates.
 - Received required 25 origin and destination reports.
 - Committee met and decided to make required edits to Section 2, fig. 14-B, to add a new item for Cordura® sleeves for loads that may contact the strap.
 - Ready to implement the new figure.
- **LT 1305:** Nucor Corporation and Gerdau: Lading of 35-, 40-, 45-, 55-, 60-, and 65-ft. beams. Each layer banded with Type 1A Grade 7 polyester webbing.
 - Received required 25 origin and destination reports.
 - Committee met and decided to archive some figures and create new ones (105-C and 106-C).
- **LT 1306:** Shipment of flex steel coils on skids with side rails – in progress.



LT 1306: Flex steel coils

- **LT 1313:** Nucor Corporation and Gerdau: Packaged beams of mixed lengths with layer separators secured to new loading figure Section 2, 106-C up to 80-in. height on an 89-ft. flatcar.
 - Received 21 origin and 11 destination reports.
 - OTLRC makes decision after 25 matching origin and destination reports are received.



LT 1313: Packaged beams

Recent OTLR Approvals and Re-Approvals:

Company Name	Expiration Date (MM/YY)	OTLR Table
Lodi Metals, Inc.	10/22	20.2
Ural Metal Processing Company, Ltd.	11/22	17.7
Messersi Packaging S.r.l	12/22	19.1
JSC Polivektris	01/23	19.1
STEK Strap Packaging (FoShan) Co., Ltd.	01/23	19.1
Caristrap International, Inc.	01/23	19.2
Foshan JIAJUN Willie PAK Co., Ltd.	02/23	19.1
Strapack Inc.	02/23	19.1
Specta Interpak	02/23	19.1
SISTEMAS DE EMBALAJE SORSA, S.A.	02/23	19.1
Multitech Products Pvt. Ltd.	02/23	19.2
Pacific Strapping, Inc.	03/23	19.2
Carolina Webbing	03/23	20.1 and 46.1
Polychem Corporation	03/23	19.1 and 19.2
BEKAP Metal Ins. San. Ve Tic. A.S.	04/23	17.7
ITI Strap S.r.l	04/23	19.1

Recent Open Top Circular Letters:

Number	Subject	Date
C-13555	Implementation of revisions to Figures 58-A, 58-D, 63-B, and 63-C – Section 6 of the AAR OTLR Manual	April 29, 2020
C-13554	Implementation of revisions to Figures 78-B, 83 and 83-A – Section 6 of the AAR OTLR Manual	April 29, 2020
C-13553	Implementation of revisions to Figures 88-B, 88-F and 91 – Section 6 of the AAR OTLR Manual	April 29, 2020
C-13541	Solicitation of comments to archive Figure 280: PIPE, STEEL, BARE, COATED, OR WRAPPED, 14 IN. TO 72 IN. O.D., 80 FT. LONG, SINGLE PILE, DOUBLE-END OVERHANG-FLATCARS – Section 2 of the AAR OTLR Manual	April 23, 2020
C-13540	Solicitation of comments to archive Figures 5-A, 5-B, 12-A, 14, and 55 – Section 5 of the AAR OTLR Manual	April 23, 2020
C-13487	AAR Safety Alert related to loading and unloading of railcars	December 6, 2019
C-13438	Solicitation of comments to include Longitudinal Lumber Pack (LLP) dunnage system in Figures 54 and 54-B, lumber on center A-Frame flatcars with cable tie-downs – Section 5 of the AAR OTLR Manual	November 6, 2019
C-13437	Implementation of revisions to Figure 11-D: Logs and/or pulpwood, unpeeled, hardwood or softwood on bulkhead flatcars, 50 ft. or over, equipped with steel side stakes – Section 5 of the AAR OTLR Manual	November 6, 2019
C-13436	Implementation of revisions to Figures 14 and 14-A – Section 2 of the AAR OTLR Manual	November 6, 2019
C-13435	Implementation of revisions to General Rule 1, Inspection and Compliance; and General Rule 2, Required Clearances – Section 1 of the AAR OTLR Manual	November 6, 2019

Unsecured Cables on Centerbeam Cars:

Railroads have observed an alarming trend in empty centerbeam railcars moving with improperly secured or loose cables. This is in violation of General Rule 22.4.3 of Section 1 Open Top Loading Rules. As this rule states: *“All cables must be properly secured per manufacturer’s recommendation prior to car movement.”*

Railroads have experienced hazardous conditions due to dragging and improperly secured centerbeam cables. To address this issue, AAR has published a circular letter C-12545: AAR Safety Alert Improperly Secured Tie-down Cables on Centerbeam Cars. AAR is urging railroads to inform shippers and consignees of the importance of properly securing all wire cables to the centerbeam car after product has been unloaded. Failure to comply with General Rule 22.4.3 may result in carriers rejecting the cars, consignees being charged for costs associated with reworking the improperly wound cables on empty centerbeam cars, and personal injuries. It is recommended that all concerned take the time to review loading/unloading practices to ensure that centerbeam cables are properly secured before railcars are shipped. Below are few example photos depicting proper methods of securing wire cables to centerbeam cars after unloading:



Examples photos of properly secured centerbeam cables

If the center hook is present and in good condition use the following option (Option 1).

Option 1: If car is equipped, use the deck key slots (shown below) that are located on the far outside of the deck or riser.



Cars are not always equipped with key slots on the deck or risers. If the key slots are not present, or If the center or side securement hooks are broken, missing or unusable use the following securement option (Option 2).

Option 2: Use the outer facing bottom key slot (shown below) located on the upright in the center of car.



For more information on proper securement of cables on empty centerbeam railcars, AAR/TTCI has posted CN's safety cable securement video at: <https://aar.com/standards/damage-training.php>. Please contact otlr@aar.com with questions or comments.

Special Equipped Fright Car Committee (SEFCC) Update

Multi-Level Pool Billing

At the spring 2020 SEFCC meeting, the Committee agreed that the purchase of new Group J chocks will no longer be pool billable after 01/01/2022, but reconditioned chocks can still be purchased. The process of removing supplemental chock systems from the bi-level fleet will begin as OEM's no longer require their use. Updated job codes are listed in the latest *Field Manual of the AAR Interchange Rules* revision. The following is the latest version of the Chock Replacement Guidelines Chart with appropriate job code.

Chock Group Designation	QLFR	Removed	Applied	Min R-Value	Sunset Date	Job Code
A	01	SCT copolymer	Replace with any secondhand group a chock, or any Group C or D chock. Racks certified after 1/1/2010 require replacement with group C or D chock	Not defined	1/1/2024	6051
	02	Sling choker copolymer				
	03	Holland copolymer				
B	01	Thrall/Trinity polymer	Replace with any Group B, C or D chock. Racks certified after 1/1/2010 require replacement with Group C or D chock	Not defined	No reconditioned or New Group B chocks after 1/1/2020 Sunset 2025	6052
	02	Thrall/Trinity Steel				
	03	Zeftek Thrall style steel				
	04	Sling choker Thrall style steel				
	05	Trinity Green				
	06					
C	01	Zeftek LoPro Polymer	Replace with any Group C or D chock	0.85"	No reconditioned or new Group C chocks after 1/1/2025	6053
	02	Holland Tri-Lo				
D	01	Zeftek Hybrid	Replace with any Group D chock	2.5"	-	6054
	02	Trinity TTM				
J	01	Holden Gate-Lock	Replace with any Group J or K chock	-	No new Group J chocks after 1/1/2022	6055
K	01	Zeftek Sta-Put	Replace with any Group K chock	-	-	6056
	02	VRS				
	03	Holland LockNLoad				
	04	Holden Grip-Lock				
P	01	VRS	On tri-levels only, replace with any Group P chock	-	-	6057
	02	Zeftek Sta-Put with strap				
Q	01	Block Chock	Supplemental chocks for removal only, includes hangers	-	-	6058
	02	Red AVR chock				
	03	Green AVR chock				

Greenbrier Multi-Max End Doors – Maintenance Advisory

In May 2020, a Maintenance Advisory was issued for 1,540 Greenbrier multi-levels to inspect all 16 door hinges of the autorack for broken or cracked hinges or hinge pins. Any hinges or hinge pins in this faulty condition must be replaced. In addition, all four doors are to be retrofitted with door safety cables per the Repair Procedures outlined in the Maintenance Advisory. The accompanying chart lists the affected multi-levels.

In accordance with AAR Interchange Rule 125, this issue is assigned as a Maintenance Advisory with Severity Code 05: "Withhold empty car from loading, contact car owner for disposition."

Affected Multi-levels				
Rack Contact	Car Mark	Car No.		Car Count
		From	To	
NS	TOCX	692934	693033	100
BNSF	CTTX	693034	693208	175
BNSF	CTTX	693934	694313	380
BNSF	TTGX	693209	693833	625
KCSM	TTGX	693834	693933	100
BNSF	TTGX	694664	694763	100
CN	TTGX	694314	694373	60
Total				1,540

MSRP Section N

On April 14, 2020, an updated *AAR Manual of Standards and Recommended Practices* (MSRP) Section N was released. In addition, two Specifications had editorial revisions that were implemented into this revision: Specification M-950, Section 8.2 and 10.0 and Specification M-970, Section 2.9. Please refer to Circular Letter C-13531 for information. To obtain the latest version of this manual or purchase any manuals please visit www.aarpublications.com

Updates from the previous MSRP release to the latest version:

Document	Date	CL Number	Title
M-950A	10/11/2018	C-13210	Implementation of Revisions to MSRP Section N, Specification M-950A, Universal Wide-Body Bi-Level Fully Enclosed Auto Rack Car
M-950	10/11/2018	C-13210	Implementation of Revisions to MSRP Section N, Specification M-950, Universal Wide-Body Tri-Level Fully Enclosed Auto Rack Car
M-970	10/11/2018 04/06/2019 08/26/2019	C-13210 C-13303 C-13400	Implementation of Revisions to MSRP Section N, Specification M-970, Condition Based Certification of Multi-Level Auto Rack Cars
M-992	05/21/2018 04/06/2019	C-13137 C-13302	Implementation of Revisions to MSRP Section N, Specification M-992, Designated Satellite Shop Repair for Multi-Level Auto Rack Cars

Status of the Automotive Industry

Normally, the Multi-Level Executive Pooling Committee (MPEC) and the Automotive Executive Logistics Committee (ALEC) meet three times per year, but with North American assembly plants and port operations idled for an extended period of time, MPEC and ALEC are having meeting online weekly. This cooperative spirit is helping to ensure a smooth startup and uninterrupted flow of finished vehicles from the assembly plants to the final destinations.

At the beginning of June, production has resumed at a handful of assembly plants and a significant increase in plant openings is expected in the coming weeks. The individual MPEC member railroads have stored a significant percentage of the reload fleet at the origin plants, ports, and nearby support yards to help facilitate a return to normalcy as the plants open back up.

Several reports show that during the pandemic shutdown, online vehicle sales have been stronger than anticipated with fleet and rental car orders slowing. During this unprecedented startup, the MPEC/ALEC team is watching the entire supply chain carefully — from the individual assembly plants to the dealerships — to address any issues. Special thanks to the entire TTX automotive/reload team for all the hard work and dedication during these unusual times.

Testing Large, Heavy Vehicles

In fall 2017, the Special Equipped Fright Car Committee (SEFCC) and the Vehicle and Equipment Quality Taskforce (VEQ) completed updates to the specification for tri-level third rail locking track chocking systems. For the last year and a half, at a request from MPEC, a joint SEFCC/VEQ TAG has now been working on grate system chock securement. The focus of the TAG activities includes chock holding capabilities. Since the first grate chocks were placed on multi-levels in the early 1990s, vehicles have been getting heavier and in some cases a lot heavier with increases of 39 percent — nearly 2,000 pounds. With this continual upward trend, chock holding capabilities require a deeper evaluation. These changes will serve the industry well for years to come and will help ensure damage-free delivery of vehicles.

The next item for TAG consideration is minimum clearances for vehicles inside multi-levels. Historically, a minimum distance of 5-inches has been required to multi-level end doors and a 3-inch clearance between vehicles. These minimum clearances were established when vehicles were secured with chains. Vehicle suspension systems were nearly unheard of when these standards were developed. Given the nature of grate chocks, looking at minimum clearances is long overdue.

The final item that the TAG is focusing on is the movement of vehicles and interaction when vehicles are secured on the same deck of a multi-level with different chock types. The new requirements mandate that each individual vehicle on a multi-level deck is secured with the same chock type, but different chock types can be present on any multi-level deck. Understanding how these vehicles move and interact during testing will present a wealth of information as new guidelines are developed.

Ford Motor Company recently has supplied five large super duty pickups for this testing. The SEFCC/VEQ TAG is fine-tuning the proposed test plan and will seek final approval from MPEC. Later in 2020, TTCL's Damage Prevention & Loading Services Team will perform a significant amount of impact testing at the Transportation Technology Center in Pueblo, CO.

The collected data will determine future vehicle clearance, provide guidance for updating grate chock specifications, and give needed clarification of how vehicles secured with different chocking systems interact. Ultimately, this will help the industry reduce costs due to bumper damage and chock jumps.

F-450 XLT



Wired Multi-Level End Doors

When discussing wired multi-level end doors, it is best to start with some history and then examine the bigger picture. Multi-level end doors are being wired closed at assembly plants in Mexico and the VEQ is looking at what needs to be accomplished in the short term and what next steps need to be taken to reduce and eliminate theft and vandalism moving forward. The battle against theft and vandalism on multi-levels is a long one, from no side panel and no end doors, to side panels with integrated anti-theft straps, to full end doors with no gaps over 5 inches, to high security bolt seals.

Today, there are more Mexico assembly plants and more vehicles shipped to the U.S. than ever before. Mexico is one of the USA's strongest trading partners, and as a result, the railroads have seen a significant increase in business, which translates to congestion at the international border gateways. When trains slow down and stop, there is an increased vulnerability to theft and vandalism. The plants in Mexico, for the most part, wire the multi-level end doors shut to reduce the potential of theft and vandalism to the border. Once at the border, the Mexico railroads attempt to remove the wiring before crossing the border with some gateways being more successful than others.

Understanding that a percentage of the multi-levels crossing the border will arrive at their destination with the door wiring still intact, the challenge is finding ways to make its removal safer and more predictable while still protecting the vehicles in transit. One solution may be to develop specific wiring schemes for each end door type, so the origin plants and the destination facilities consistent method of applying and removing wiring. Though short-term fixes are helpful, the issue requires innovative thinking about new methods for sealing and securing multi-level end doors during transit such that wiring and cabling is no longer necessary.

A VEQ working group comprised of vehicle loading and unloading contractors, railroads, railcar manufacturers, and vendors met early this year at the CSX Transportation TDSI facility in Lawrenceville, GA to: 1) develop wiring schemes for multi-level end doors; 2) consider cabling versus wiring, and 3) develop ways to secure multi-levels during transit that does not require additional wiring and will protect vehicles against theft and vandalism.

Specific end door wiring schemes have been developed for the different end door types including radial, seal-safe, and tri-fold end doors. This encompasses the lion's share of the reload fleet. These wiring scheme instructions are being translated into Spanish and will be distributed by the Mexico United States Automotive Rail committee (MUAR) to the individual railroads and origin points in Mexico.

The car builders and vendors are also working on next steps to ultimately move past the need to wire end doors. These ideas will be presented to the VEQ and then to MPEC. Special thanks to CSX Transportation, TDSI, the individual railroads, contractors, car builders and vendors that have been working on this project.

Quality Reviews

Origin Quality Review	1st Quarter	Current Program Averages
Overall Score	92.75%	92.75%
Mechanical	89.81%	89.81%
Transportation	93.02%	93.02%
Mfr. Contractor	96.17%	96.17%
Facility Procedures	94.96%	94.96%

Destination Quality Reviews	1st Quarter	Current Program Averages
Overall Score	97.08%	97.08%
Transportation	94.24%	94.24%
End Drs./Decks/Plates	96.33%	96.33%
Unloading	97.91%	97.91%
Baying	99.06%	99.06%
Facility Procedures	96.60%	96.60%

DPLS Quality Review Update

In recent weeks, there have been hopeful signs of our automotive industry returning to production. Assembly plants are gradually coming back online, and production is starting to resume at many locations. As vehicle production resumes, employees across North America will be returning to productive status after layoffs or limited work. This presents an opportunity for returning employees to review training procedures for AAR standards in regard to automotive handling. With travel still under restriction in many areas, AAR/TTCI Damage Prevention and Loading Services will be making its AAR Quality Review training programs for Origin, Destination, or Mechanical Pre-Trip available in an online format through GoToMeeting™. The cost for this training will be \$1,000.00 for a 2-hour session and \$400 for each additional hour with a maximum of 50 attendees for each session. In addition, the AAR/TTCI DP&LS team will also offer M-970 rack inspector training; the cost of this course is \$1,000.00 for the 2-hour training session (\$400.00 for each additional hour) and \$550.00 for each attendee exam. This is a great opportunity to get returning personnel in line with safety and damage prevention standards.

If your company would like to request online training for AAR Quality Reviews please contact Craig Millbauer, TTCI DP&LS Damage Prevention Specialist II (craig_millbauer@aar.com). If you would like to schedule training for M-970 rack inspector certification please contact David Hendrixon, DP&LS Manager II, Field Operations (david_hendrixon@aar.com).



The TTCI Damage Prevention & Loading Services team conducts testing for railroads, shippers and suppliers per accepted industry loading rules and standards. Coordinating their efforts through the DP&FC, OTLR and SEFC Committees, DP&LS is responsible for testing and publishing approved loading methods and materials for closed car shipments moving in boxcars and intermodal equipment, as well as open top and multi-level shipments.

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