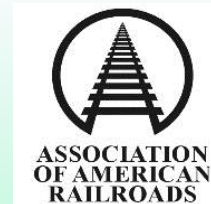




MARTS
2015

Minneapolis, MN



Mechanical Inspection Department



Stephen Berkshire
Chief Inspector MID



- ◆ Explain the mission of the MID
- ◆ Brief History of MID
- ◆ Show Location of MID Inspectors
- ◆ Description Types of Exceptions
- ◆ Suggest ways to help Improve your facility's Inspection results

MID Mission Statement

- ◆ ***Assist the Rail Industry in providing safe transportation through Quality Assurance, Technical Inspections and Training, to ensure customers meet industry specifications, Codes of Federal Regulations (CFR) and AAR Interchange Requirements***



- ◆ ***"...and new Rule 124 added, to provide a system of checking by the ARA, Mechanical Inspection Department and authority for refund of proper charges detected by such checks, in the Interchange Rules instead of the Supplementary Regulations."***
- ◆ **Rule 124 was continued in place in 1934 when ARA became the AAR and funded by the railroads.**
- ◆ **AAR is Over 80 Years Old**





Reporting Process

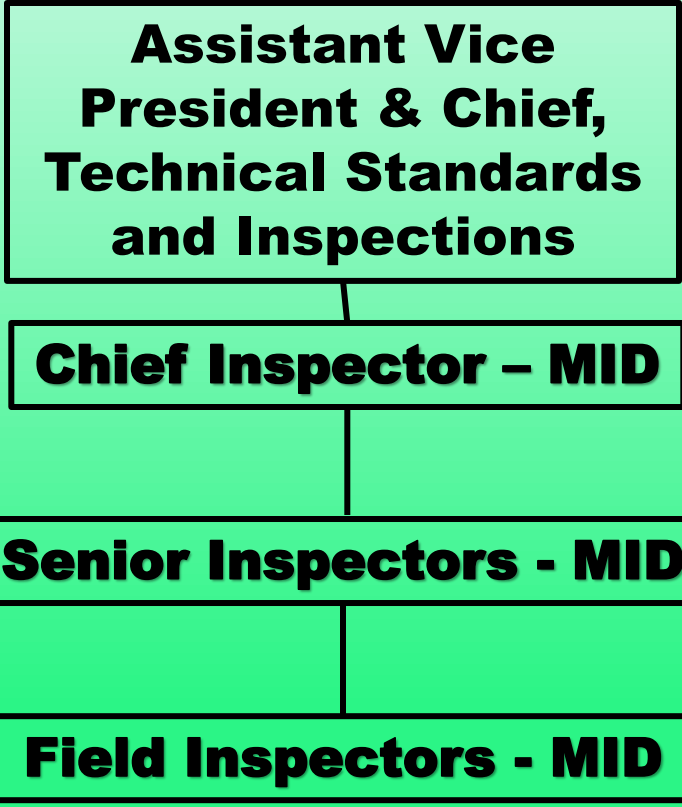
- ***Inspectors document activity from working papers and forward reports to the office of the Chief Inspector MID within 7 days of the particular inspection activity***
- ***Reports are reviewed within fifteen days of receipt from field***
- ***The Chief Inspector MID and/or the Executive Director, Rules and Standards review and process field inspection reports***
- ***Policy prohibits field inspectors from distributing report copies***

Reporting Process

- **Requests for copies of reports should be addressed to:**
 - **Chief MID Mechanical Inspection
Transportation Technology Center, Inc.
55500 DOT Road
Pueblo, Colorado 81001
or via email using the address - mid@aar.com**
- **Policy prohibits field inspectors from distributing report copies**



Organizational Chart





Mechanical Inspection Department
Cumulative Industry Experience = 482 years
Inspector Average Service Years = 32

Ross Shaw
Canada

Dave Sullivan

Jeff Grainer

Craig Mayhew

Brad Purcell

Ken Pfahler

Jon Marsh

Steve Berkshire

Dave Walters

Brian Crosier

Ernie Guzman

Billy Benton

Stephen
Vanderhoff

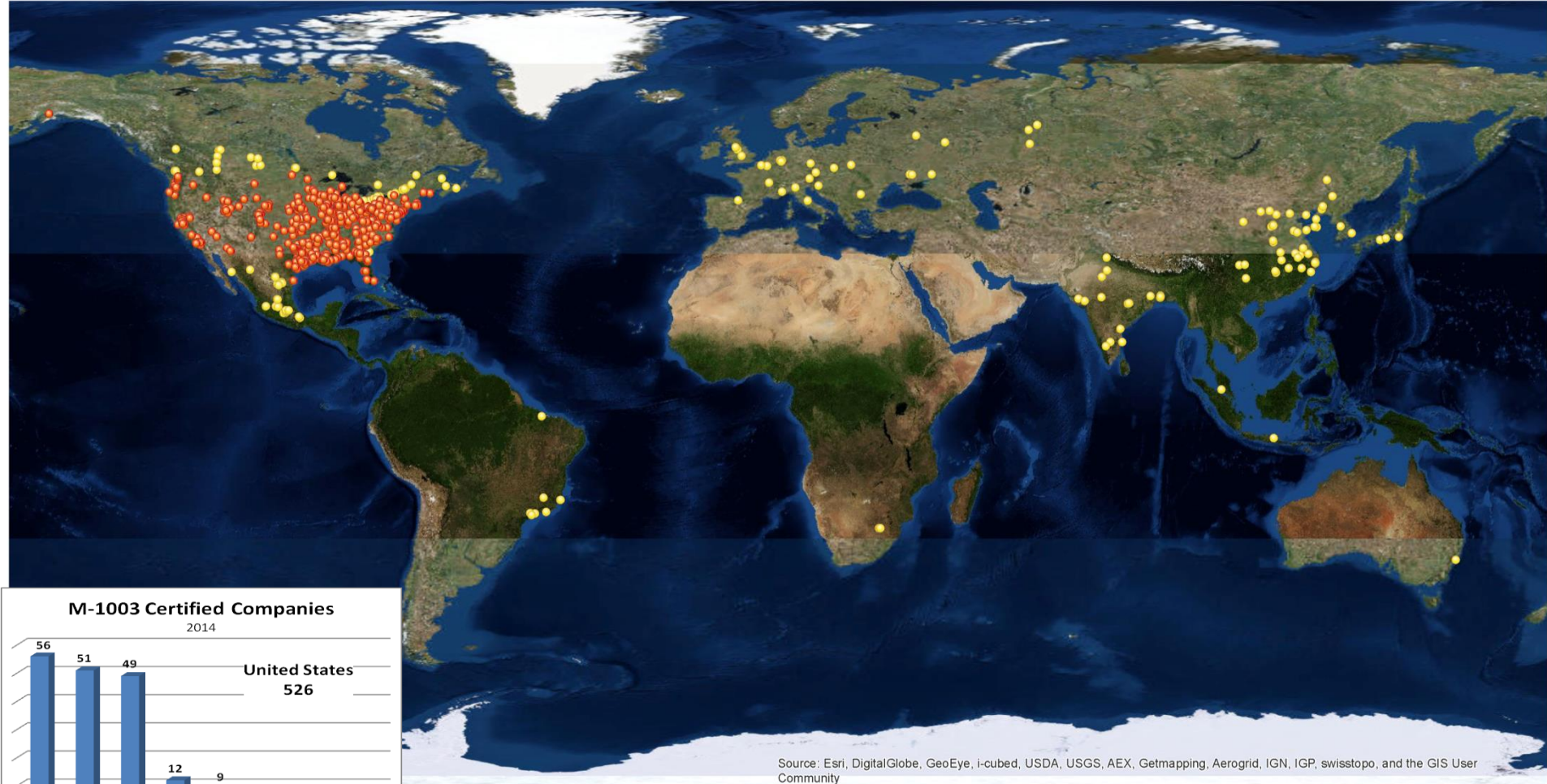
Dave Wambach

Jorge Molina
Mexico

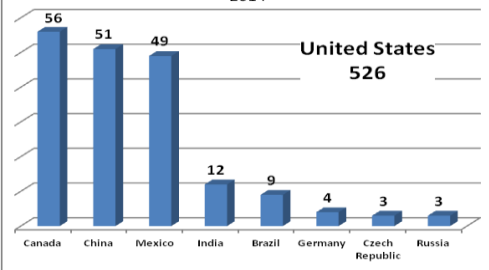




M-1003 Q-A Certified Companies in the World

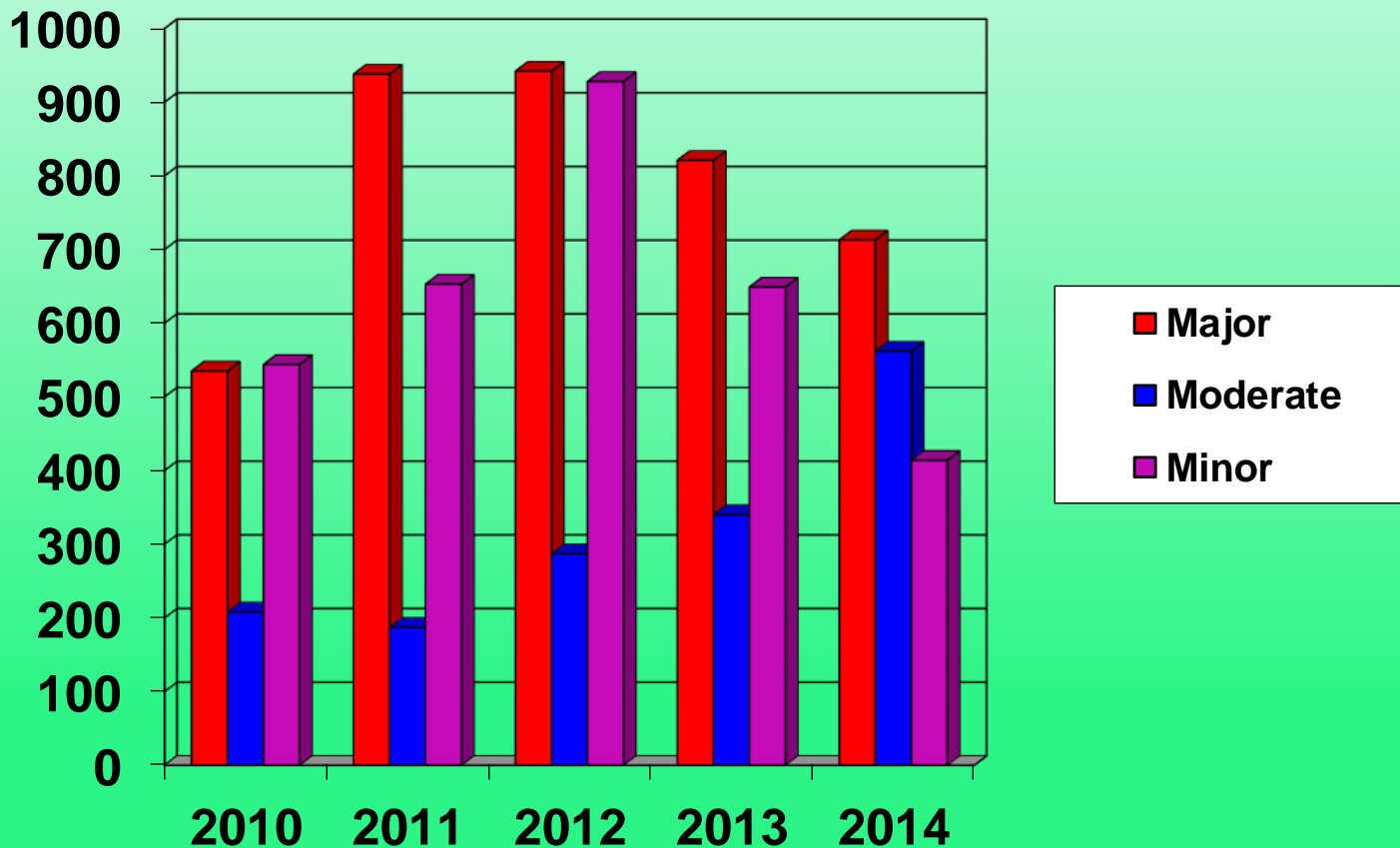


M-1003 Certified Companies
2014

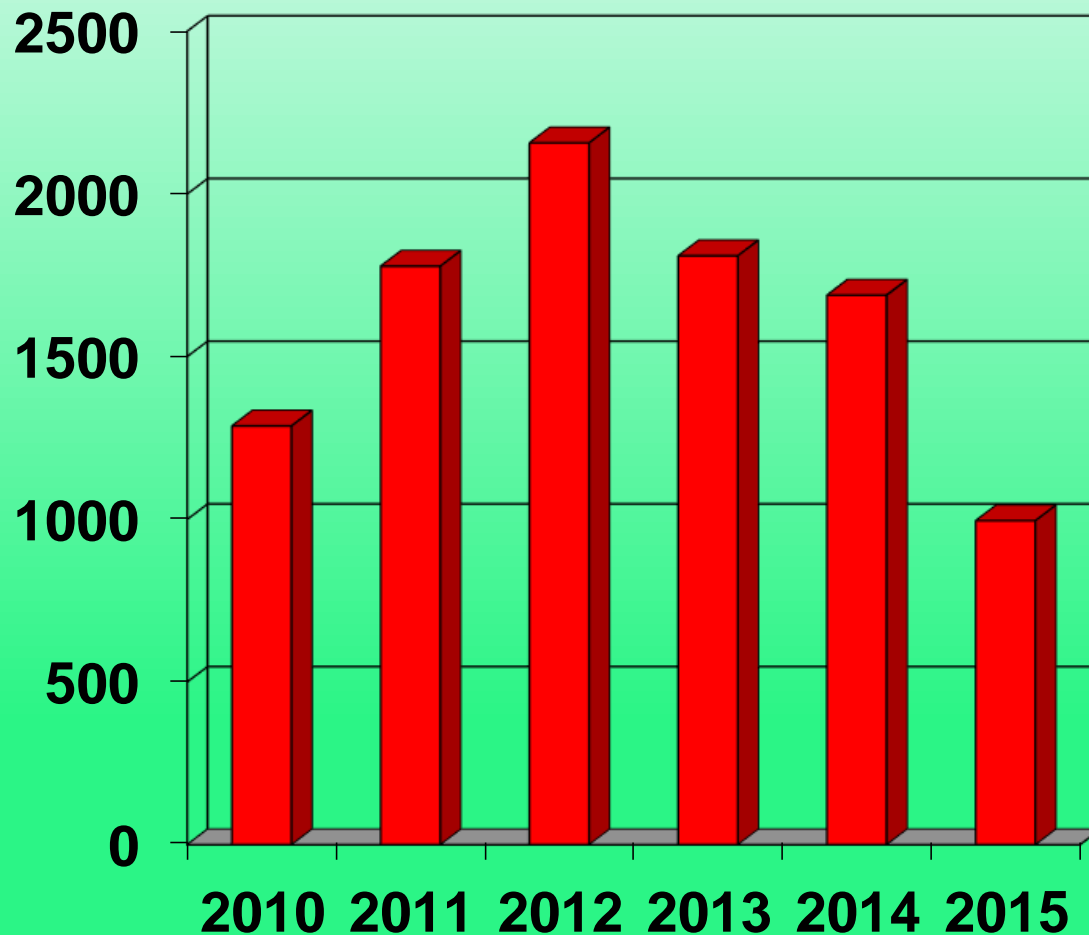


Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

2010 – 2014 Exceptions Noted



2010 – 2015 Total Exceptions Noted





2014 – Top Five Exceptions Noted



◆ **Outbound Inspection** **354 = 21 %**



◆ **Material Storage** **287 = 17 %**



◆ **Wheel Sets** **255 = 15 %**



◆ **Air Brake Test or Device** **237 = 14 %**



◆ **Required Gages & Use** **144 = 8 %**

NOTE: If we add gages and publications together we would have 16 % of the exception total





2015 – Top Five Exceptions Noted

◆ Material Storage	189 = 19 %
◆ Outbound Inspection	176 = 18 %
◆ Wheel Sets	119 = 12 %
◆ Required Gages & Use	106 = 11 %
◆ Air Brake Test or Device	89 = 9 %

**NOTE: Welding items 50 exceptions = 5 %
(qualifications / procedures / rod storage)**



2014 Outbound Inspection 354 exceptions

- ◆ **Constant Contact Type Side Bearings - Clearances, Adjustments & Repairs**
- ◆ **Hand Brake Inspection-Lubrication**
- ◆ **Not Checking Wheel Impact Advisory**
- ◆ **Boxcar Doors not being Lubricated and Cycled**
- ◆ **Long Shank Couplers not Lubricated**





11/28/2011



- ◆ Safety appliances not repaired
- ◆ Anti-creep not correct
- ◆ Train line hose extensions not correct
- ◆ Boxcar and gondolas not being graded properly
- ◆ High wedge rise on trucks
- ◆ F type retainer pin on Y-47 pin assembly
- ◆ Cracks in sills



Material Storage – 287 Exceptions in 2014



- ◆ AIR BRAKE;
- ◆ Storage of Rebuild/New Parts
 - Truck mounted pistons
 - Rebuilt valves
 - Train-line hoses
 - Gaskets
- ◆ Storage of Removed Parts
 - Valves with vents covered
 - Service portions with stem protectors
- ◆ Air Brake Grease
 - Open or contaminated





Material Storage Examples



◆ WHEEL SETS:

- ◆ Stored Properly
 - Wheels on top of wheels
 - Bearings in contact with wheel flange
 - Axle in contact with flange causing nicks
 - Wheel sets handled metal to metal contact





2014 Wheel Sets -255 Exceptions

- ◆ NO defect – not condemnable
 - ◆ Wrong defect
 - ◆ Overheat bearings not marked (white stripe)
 - ◆ Bearing information not applied to bearing
 - ◆ Information on wheel sets and axle is missing or wrong (scrap / R-B overheated / why made code)
- Note; for 2015 location now required



- ◆ SINGLE CAR TEST;
- ◆ Device in service not working properly
- ◆ Performed properly manual and automated
- ◆ Daily test performed improperly
- ◆ SCT device or air gages overdate
- ◆ UMLER information
- ◆ Single car test device not modified (May 2013)
Deadline is June 1, 2014 for these to be done
- ◆ Lack of use of 914 grease





2014 Gages 144 exceptions

◆ Unavailable Rule 1 gages

- Lost or misplaced
- Only have one gage for multiple sites

◆ Bent / Broken

- Broken
- Part missing
- Bent beyond use

◆ Did not know how to use them (on the rise)

- Younger work force
- Not enough emphasis on training
- Not used frequently enough
- Don't know what the gage is showing them



$\frac{7}{8}$

$\frac{11}{16}$

$\frac{14}{16}$ $\frac{15}{16}$

2

1
DIA



2014 Publications

122 Exceptions

◆ Out of date Rule 1

- Hard copy
- Electronic

◆ Not available Rule 1

- Should be available to the repairmen

◆ Were unaware other than Rule 1 pubs were needed

- Items like the S-327 for side frames – pedestal roofs / snap on liners
- Or the S-4009 / S-4010 for slack adjusters



How Do We Improve?



◆ Self Audits

- Use checklist
- Out bound inspections

◆ Better Training / Mentorship

- In-house
- On-line / mail courses
- Structured program
- Assigning someone to work with more experienced carmen

◆ Ask Questions of the worker

- Have them show you where they find the information
- Help them find the answers



Helpful Items



- ◆ Checklist Available at TTCI webpage

http://mid.aar.com/mid-technical_checklist.htm

- ◆ Technical Checklist

Freight Car Maintenance Inspection

M-214 Checklist

Bearing Mounting Checklist

End Cap Removal Checklist

Extended Service Sample Car Checklist

Rule 88 Sample Car Checklist

New Car Builder Checklist

Wheel Shop Inspection Sheet

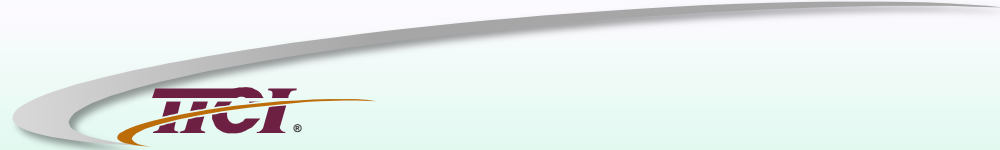


Wrap-up



- ◆ **Correct Repairs on Out-bound Cars ***
- ◆ **Material Storage**
- ◆ **Wheels ***
- ◆ **Air Brake Items ***
- ◆ **Gages & Publications**





QUESTIONS?

