MARTS 2015
Minneapolis, MN

Mechanical Inspection Department

Stephen Berkshire
Chief Inspector MID
Objective of Presentation

♦ 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

- Assistant Vice President & Chief, Technical Standards and Inspections
  - Chief Inspector – MID
  - Senior Inspectors - MID
  - Field Inspectors - MID
Mechanical Inspection Department

Cumulative Industry Experience = 482 years
Inspector Average Service Years = 32

Brad Purcell ▲
Dave Sullivan ▲
Ross Shaw ▲
Canada

Dave Walters ▲
Jeff Grainer ▲
Ken Pfahler ▲

Craig Mayhew ▲
Brad Purcell ▲

Jon Marsh ▲
Brian Crosier ▲

Ernie Guzman ▲

Billy Benton ▲
Steve Berkshire ▲

Stephen Vanderhoff ▲

Dave Wambach ▲

Jorge Molina ▲
Mexico
M-1003 Q-A Certified Companies in the World

[Map showing certified companies around the world with a bar chart indicating the number of companies in different countries.]

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

![Bar Chart showing total exceptions noted from 2010 to 2015]
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
Outbound (cont)

♦ 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
Material storage (cont)

♦ 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
2014 Air Brake Items  237 exceptions

♦ 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
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?