



MID Update & Timely Topics



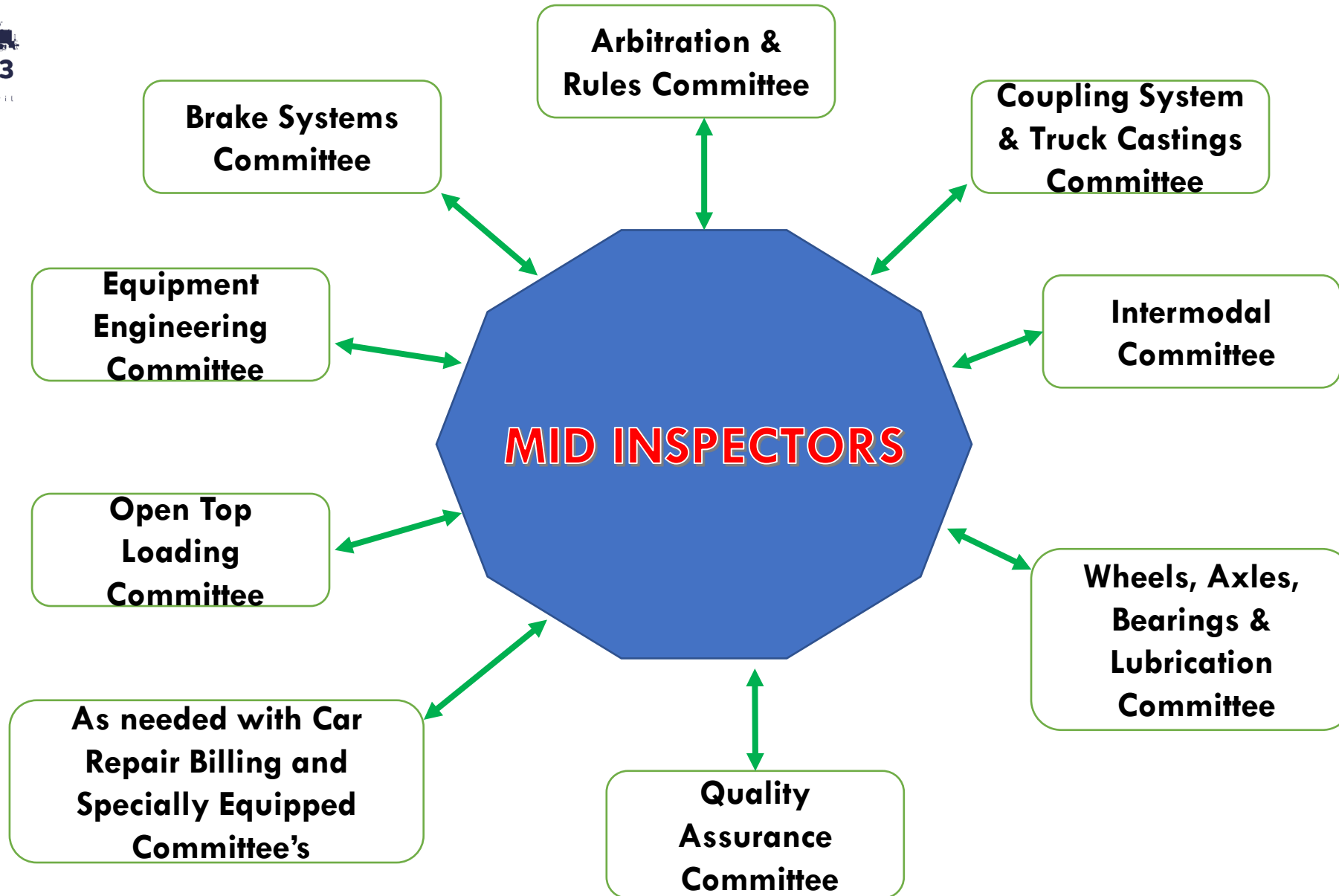
Stephen Berkshire – Chief Inspector

MxV Rail \ AAR



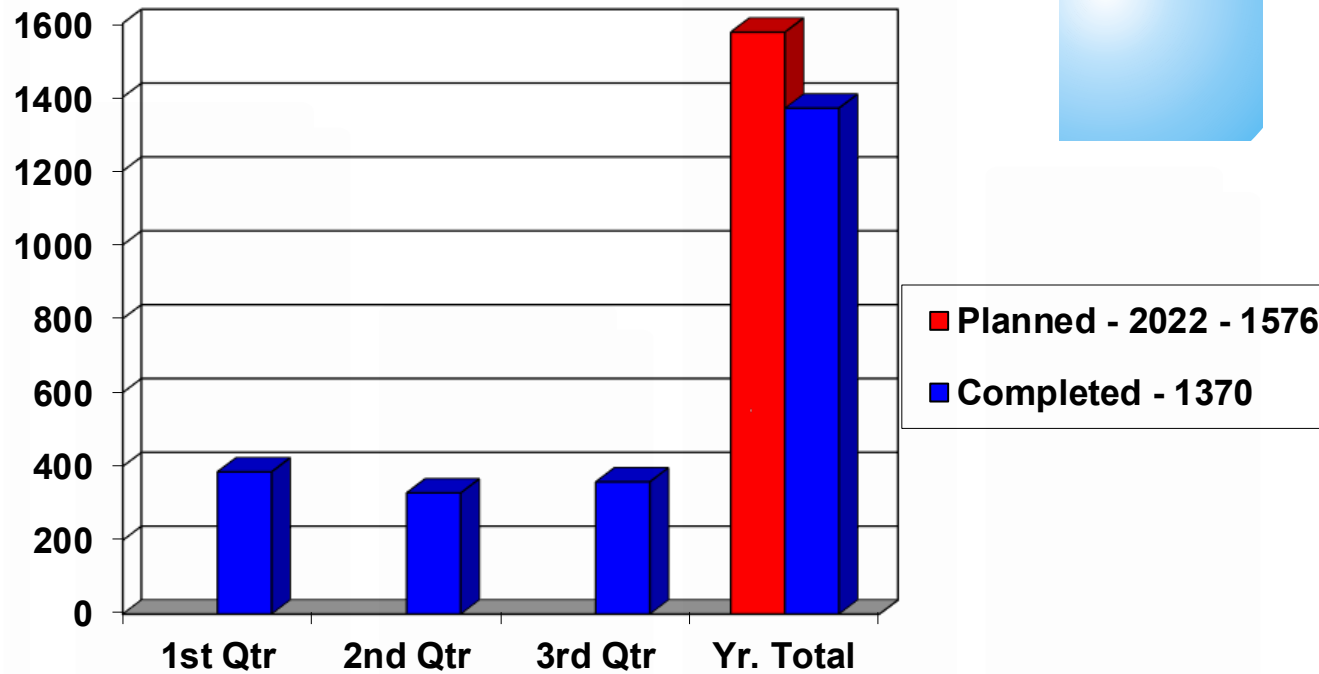


AAR Technical Committee AND MID INTERACTION





2022 Activities



2022 Exception % Per Country

Country	Mjr.	Mod.	Min.	Excpt.
USA - 640	34%	42%	24%	1535
Canada - 73	17%	53%	30%	189
Mexico - 65	22%	51%	27%	59
Total Exceptions	563	780	440	1783



2022 – Top Exception Areas Noted Repair Track Exceptions

□ Material Storage	337 = 22.5 %
□ Outbound Inspection	330 = 22.0 %
□ Billing Items	209 = 14.0 %
□ Wheel Sets	154 = 10.3 %
□ Airbrake Items (test/device)	118 = 7.9 %

NOTE:

Gage (missing and use)

100 exceptions = 6.7 %

Pubs (out of date / no access)

54 exceptions = 3.6 %







Billing Findings

7.1's not done
Air Brake dates not updated as required
Air Brake repairs made on expediate but required tests were not done
Airbrake test being performed & billed when not actionable(ex:mobile for overdate)
No record of required wheel set change being completed
Empty gondola-boxcars once on the repair track are not being graded
Facility Billing for welds by a non qualified personnel
Facility could not produce billing records
Facility is charging for painting hand brake chain when NOT original application
Facility is not addressing A2 defects when car is on repair track (wheels/sct/aei tags)
Facility is not performing SCT or set & release air tests
Facility is not listed in FindUs.rail
Facility is charging for repairs that were not made / billing does not match repairs
MD11 or MD115 form not prepared or submitted
Facility can not access MD11 or MD115 or MD500
MD 500 / 502 not filed out or not within the proper time frame
UMLR fields not updated as required
Facility is charging for fall protection but does not have equipment to meet government standard
No record of a passing ASCT but car was billed and UMLR updated
Required air brake test (SCT) not completed as required
Review of derailment records revealed acar derailed with no record of an RBI or wheel change being done
ORR's revealed that qualifiers and why made codes are missing or empty / load status is not noted / splc missing
Review of original records of repair revealed that they were not being signed
A2 defect repair made when not on repair track
Car sent to repair track for why made 61
SCT performed on a non repair track for A2 defects
Billing incorrect // charges incorrect
SPLC is incorrect for location of repair or not used
Wrong why made, job or responsibility code used
ASCTD information (in the machine) is incorrect or questionable
DDCT is not used





Field Manual Rules Items to Note

Rule 3.B.4

Rule 4.B.12 & 4.E.26 - 27

Rule 62.E.9

Rule 82

Rule B.5 (7.1's)

FM Appendix B.C.5



3.B.4. All single car tests must be performed via 4-pressure (if car is equipped) using a 4-pressure automated single car test device except when:

- Prior to **July 1, 2023**, 4-pressure automated single car test device is not available
- Car is exempt per Rule 4.B.12.

4.B.12. It is allowed to retrofit any car at the time of a single car test with all necessary equipment to allow 4-pressure testing and test from the newly installed equipment except when:

- The car has a built or rebuilt date prior to July 1, 1975
- Car clearance issues exist that do not allow the application of 4-pressure equipment
- The repairing location does not have the capability of performing 4-pressure testing

3.B.4. Todas las pruebas de frenos de carro individual deben ser realizadas usando un Puerto 4 (si el carro está equipado) usando un Puerto 4 del Aparato de Pruebas de Carro Individual excepto cuando:

- Antes de **Julio 1, 2023**, no está disponible el puerto 4 del aparato automatizado de pruebas de freno.
- El carro está exento de acuerdo con la Regla 4.B.12.

4.B.12. Está permitido modernizar cualquier carro al momento de la prueba de carro individual con todo el equipamiento necesario para permitir una prueba de Presión de 4 puertos del equipo instalado excepto cuando:

- El carro tiene una fecha de construcción o reconstrucción previa a Julio 1, 1975
- Existen problemas con la holgura del carro que no permiten la aplicación del equipo de 4-Presión
- El lugar de reparación no tiene la capacidad para desarrollar pruebas



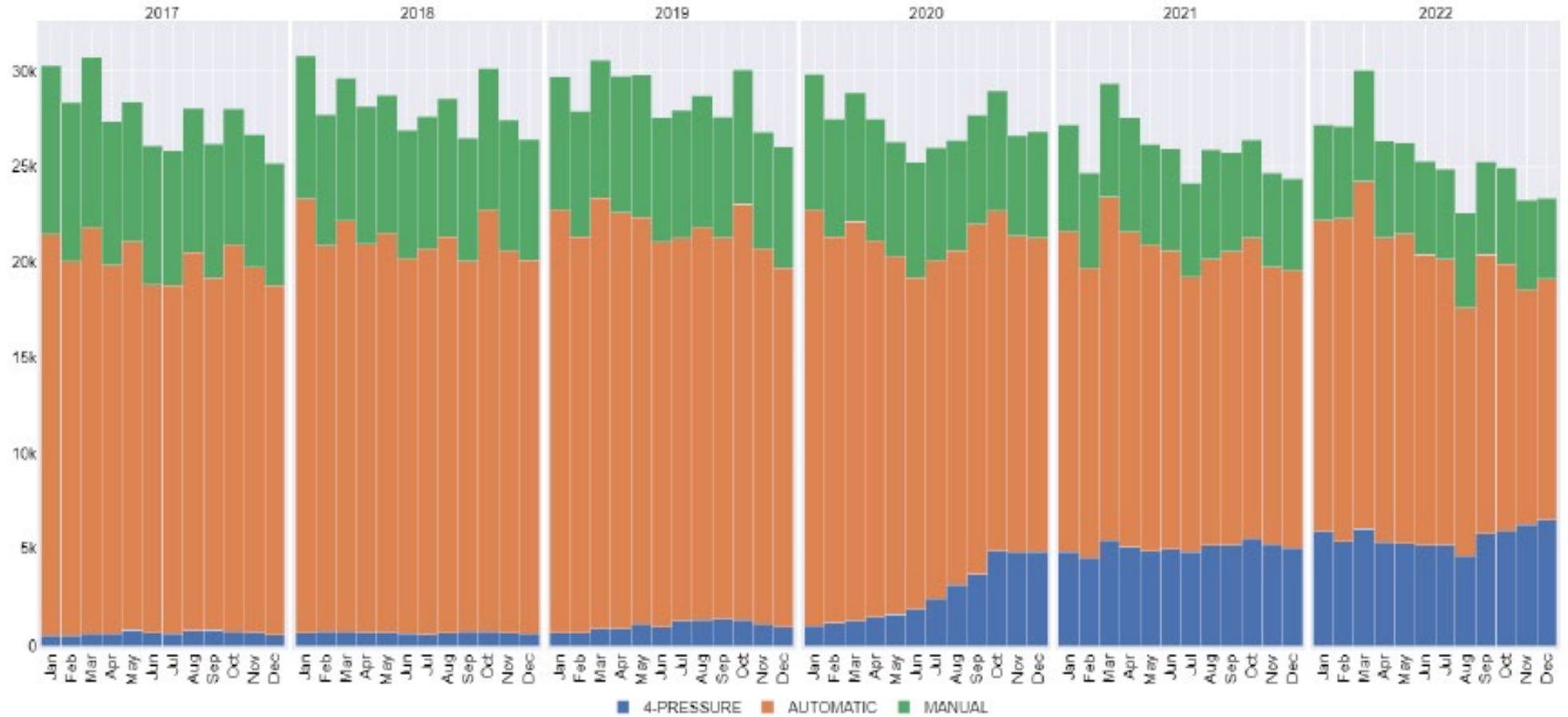
4.E.26. After **July 1, 2023**, 4-pressure testing must be used if the car is equipped with 4-pressure testing capability and a single car test is being performed for any reason.

4.E.27. Control valve set not equipped with 4-pressure test capability after **June 30, 2025** is not allowed.

4.E.26. Después de **Julio 1, 2023**, se debe usar un aditamento de 4 presión si el carro está equipado con capacidad para 4 puertos y se realiza una prueba de carros individual por cualquier razón.

4.E.27. Conjunto de Válvula de Control no equipado con capacidad para prueba de 4 puertos después de **Junio 30, 2025** no está permitido

CRB Monthly SCABT Counts By Test Type and Year (2017 -2022)



Let's Discuss CCSB's Rule 62 E.9

9. When replacing elastomeric elements in non-capped designs, body side bearing wear plates should never be **relubricated** (per new installation instructions) unless elements and body side bearing wear plate are being renewed simultaneously.



9. Cuando se reemplacen elementos elastoméricos en diseños que no incluyan tapas metálicas, las placas de desgaste de las rozaderas de cuerpo nunca deben **relubricarse** (según las instrucciones de instalación cuando están nuevas), a menos que se cambien simultáneamente los elementos y la placa de desgaste de la rozadera de cuerpo.



12. All excess grease should be removed from the side bearing wear surfaces when servicing. This does not apply to new application instructions; consult manufacturer pocket guides for new installation directions.

12. Cuando se haga el mantenimiento, se debe quitar todo exceso de grasa de las superficies de desgaste de la rozadera lateral. Esto no aplica a las instrucciones de nueva aplicación, consultar la guía de bolsillo del fabricante para instrucciones sobre nueva instalación.



Miner CCSB

Car Body Wear Plate

The car body wear plate must conform to AAR standard S-235. The car body side bearing wear plate must be smooth. Any weld spatter, heavy rust or surface projections must be removed by grinding. Fastener heads must be smooth and flush below wear plate surface, and the fasteners securely tightened. A twelve-inch steel straightedge is helpful for checking the flatness of the body wear plate and the truck bolster side bearing mounting surface. Plates with surface variations between fastener holes greater than 1/8 in., or greater than 1/16 in. over any 4 in. space between the fastener holes, must be replaced. Surface must be reasonably parallel to truck bolster side bearing mounting surface. Variations should not exceed 1/16 in. across width or 1/8 in. end-to-end.

Minimum Wear Plate Size

Model	Minimum Size
TCC, TCC-II, TCC-III LT, TCC-III ST, LTLP-B, TCC-IV LT	4 in. wide by 12 in. long (101.6 mm x 305 mm)
TCC RA, TCC-III RA	Consult car builder

TCC-45 LTR, LTRB, LTLP, LTLP-C and TCC-60 LTR

Truck Centers	Min. Width	Min. Length
70 ft. (21 m) or less	4 in. (101 mm)	12 in. (305 mm)
70 ft. (21 m) to 82 ft. (25 m)	4 in. (101 mm)	14 in. (356 mm)
82 ft. (25 m) to 94 ft. (29 m)	4 in. (101 mm)	16 in. (406 mm)
Greater than 94 ft. (29 m)	4 in. (101 mm)	18 in. (458 mm)

Please refer to AAR Field Manual Rule 61 for more detailed information regarding body wear plates.

Lubrication

For **new** car applications it is recommended to add a thin coat (1/4 tsp.) of lithium lubricant to the top surface of the top cap to help reduce the frictional resistance during the break-in period. Do not use Molybdenum disulfide type lubricants since they are too permanent. Some recommended lubricants are Texaco Multifak 2, Amoco Amolith EP-2, Citgo H-2, Mobil Grease 2, Shell Alvania 2 or Exxon Lidok EP-2.

Miner does not recommend lubrication when new side bearings are applied for maintenance. However, this is at the discretion of the car owner. Care should be taken when applying lubrication during maintenance to ensure hunting performance is not compromised.



Miner no recomienda la lubricación cuando se aplican cojinetes laterales nuevos para el mantenimiento. SIN EMBARGO, esto queda a discreción del propietario del carro.

Amsted Rail

- Amsted instructs you to lubricate the top surface of the CCSB. To also lubricate the vertical wear surfaces, both sides.

Amsted le indica que lubrique la superficie superior del CCSB. Para lubricar también las superficies de desgaste verticales, ambos lados.

Bolster Thickness		Bolt Length	Thread Length
Min	Max		
.625	1.125	3.25	2.25 max
1.125	1.500	3.50	2.50 max

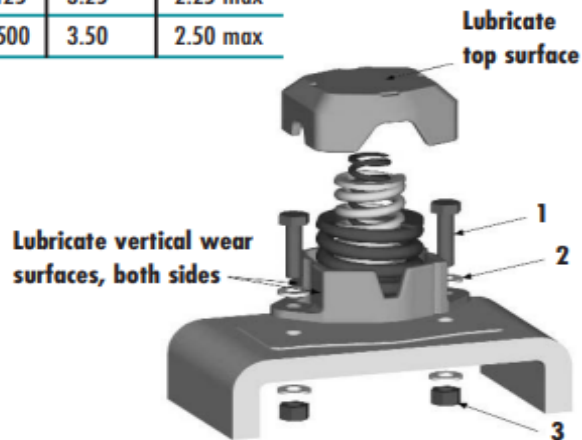


Figure 5:
Bearing Assembly (5600 LT Shown)

Item	Qty.	Description
1*	2	.875-9 UNC-2A HEX HEAD BOLT, SAE GRADE 5 OR ASTM A-449
2	4	.938 I.D. X 1.75 O.D. HARDENED STEEL PLAIN WASHER
3	2	.875-9 UNC-2B SELF LOCKING HEX NUT SAE GRADE 5

*Please refer to bolt length chart

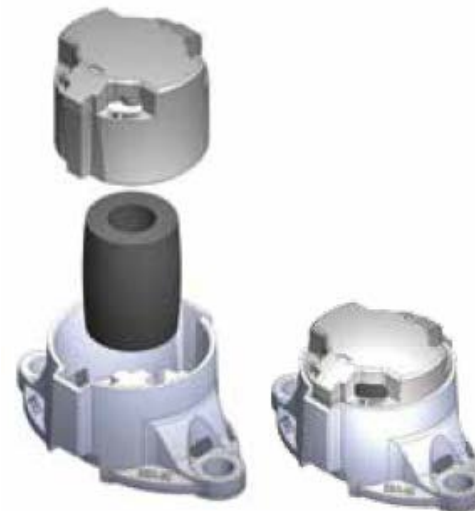


SK-3103 SBX Installation & Maintenance Procedure

4.0 Installation:

- 4.1 The side bearing cage is to be secured to the bolster pad by $\frac{7}{8}$ "-9 Grade 5 or better bolts with self locking nuts. Bolts should be torqued to 365-435 ft-lbs if dry and 275-325 ft-lbs if lubricated.
- 4.2 Check the element markings to see if the model number matches the cage. The side bearing element should fit over the center cross. If the element doesn't fit over the cross or if the element has greater than $\frac{1}{16}$ " side clearance, then the wrong element is being applied.
- 4.3 It is recommended, for new cars only, a thin layer of No. 2 lithium grease or equivalent be applied to the top cap surface. This will reduce the frictional resistance during the break in period.

Cardwell Westinghouse



Se recomienda, solo para caros nuevos, aplicar una capa delgada de grasa de litio No.2 o equivalente a la superficie de la tapa superior.

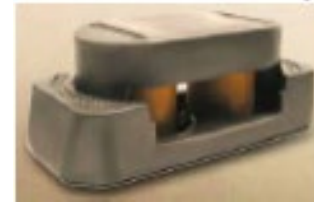
These measurements assume that the car is empty, positioned on reasonably level track, and has positive centerplate contact. Tops of metal rockers or rollers should not be used as reference points to measure setup height for constant contact side bearings.

If the car is equipped with any type of new 12" graphite lube discs or elastomeric center bowl liner, it must be in place when measuring for setup height adjustment. In addition, side bearing setup heights should be adjusted to $3/4" \pm 1/16"$ for all RetroXT .P, LPC or SP side bearings and $5-1/8" \pm 1/16"$ for all other side bearing products.

Never relubricate a side bearing in service, unless the metal caps or body side bearings are being replaced. In this case, apply a 1-1/2" diameter dab of lithium based grease to the center of the side bearing cap. This allows the body side bearing wear plate surface to polish, resulting in smooth consistent turning of the truck.

A. STUCKI Company

No lubrication shall be applied unless one of the two contact surfaces are replaced.



Nunca vuelva a lubricar un cojinete lateral en servicio, a menos que la tapa de metal o los cojinetes laterales del cuerpo estén siendo reemplazados.

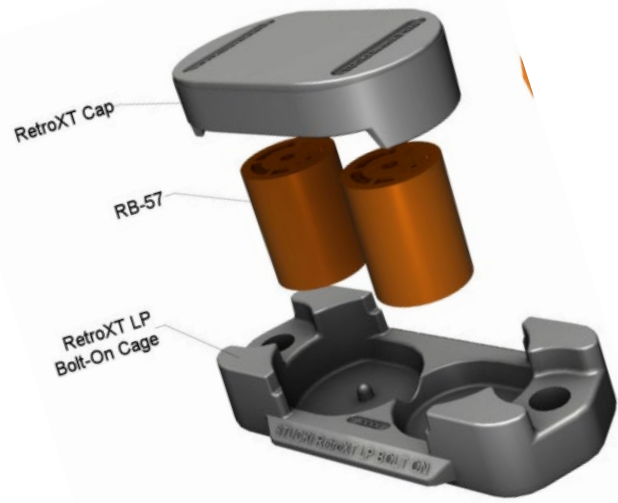


FIG. 2.4 RETROXT LP BOLT-ON, 4500LB. PRELOAD

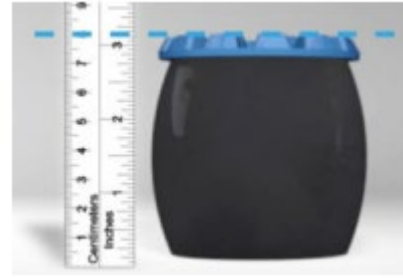


Figure 1:
Spring Control™ 3800 LT Side Bearing

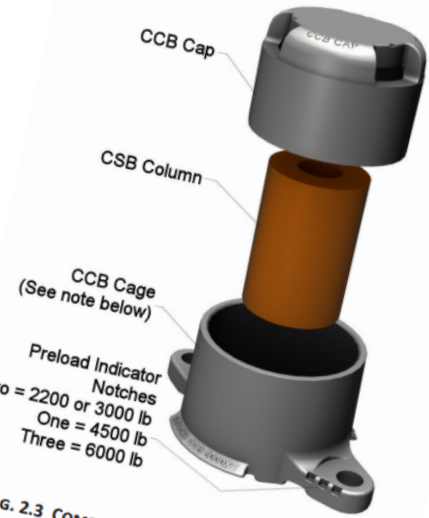


FIG. 2.3 COMPACT COLUMN SIDE BEARING
Replacement cages are ordered by specifying preload, i.e. CCB6000XT Cage, where 6000 = preload, XT for extended travel. Also available in 2200lb & 3000lb preload. The 2200lb & 3000lb models are not for interchange service.





WELDING REPAIRS SOME ITEMS REVIEWED

- Prepare the metal (i.e. – grinding, machining, chipping, gouging or cutting).
- Wind shelter if more than 5 mph wind is present.
- Preheat material if temperature is zero or below.
- Inspect the weld (i.e. – porosity, they removed the slag, undercut, overlap, and any other weld defect).
- Welder Qualification Records or Welder Performance Records
- Electrode/Wire Storage
- Welders are considered to remain qualified if they have welded with each process every 6 months. Look for a log that shows this record.



AWS D15.1/D15.1M:2012

ANNEX D



**SAMPLE FORM FOR WELDING PROCEDURE SPECIFICATION (WPS)
(For Carbon, Low Alloy, and Stainless Steel Sheet Metal)**

Company name _____ By _____
 Welding procedure specification no. _____ Rev. _____ Date _____
 Supporting procedure qualification test record(s) no. _____
 Welding process(es) _____ Type _____ (Automatic, manual, etc.)
 Mode of transfer for GMAW _____ (Short circuiting, spray, etc.)

JOINTS
 Type of welded joint(s) _____
 Backing Yes No
 Backing material type _____
 Groove welded from:
 One side _____ Both sides _____

COATINGS
 Type _____
 Thickness _____

Sketch of Joint Details

BASE METAL
 Material specification type and grade:
 Sheet steel _____ to _____
 Support steel _____
 Thickness range:
 Sheet steel _____
 Support steel _____
 Thickness _____
 Base metal preparation _____

FILLER METAL
 Specification _____
 Classification _____

POSITIONS
 Position of groove _____
 Position of fillet _____
 Progression _____

PREHEAT
 Preheat temperature min. _____
 Preheat temperature max. _____

GAS
 Shielding gas _____ Flow rate _____
 Percent mixture _____

Flow rate _____

FLUX _____

TECHNIQUE

Pass No.	Electrode Size	Electrical Characteristics		Travel Speed	Melting Rate	Wire Feed Speed
		Amperes	Volts			

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in AWS D15.1: (_____) *Railroad Welding Specification for Cars and Locomotives*.
 (year)

Authorized by _____ Date _____

Form D-13A

**Por cada WPS
debes tener un PQR**

WPS – WELDER PERFORMANCE SPECIFICATION





PQR – PROCEDURE QUALIFICATION RECORD



ANNEX D

AWS D15.1/D15.1M:2012

Table 10.5
Procedure Qualification Type and Position Limitations
(When Notch Toughness is a Requirement)

Qualification Test	Type of Weld and Position of Welding Qualified ^a				
	Weld	Plate		Pipe	
Plate or Pipe Positions ^b		Groove	Fillet	Groove	Fillet
Plate-Groove Complete Joint Penetration	1G	F	F	F ^c	F ^c
	2G	F, H	F, H	F, H ^c	F, H ^c
	3G ^e 4G	All Ψ OH	All Ψ OH		
Plate-Fillet	1F		F		F ^c
	2F		F, H		F, H ^c
	3F ^e 4F		All Ψ OH		V ^c OH ^c

SAMPLE FORM FOR WELDING PROCEDURE QUALIFICATION TEST RECORD (PQR)
(For Carbon, Low Alloy, and Stainless Steel Sheet Metal)

Company name _____
 Procedure qualification test record no. _____ Date _____
 Welding procedure specification no. _____ Rev. _____ Date _____
 Welding process(es) _____ Type _____
 Mode of transfer for GMAW _____ (Automatic, manual, etc.)
 _____ (Short circuiting, spray, etc.)

JOINTS
 Type of welded joint(s) _____
 Backing Yes No
 Backing material type _____
 Groove welded from:
 One side _____ Both sides _____

POSITIONS
 Position of groove _____
 Position of fillet _____
 Progression _____

GAS
 Shielding gas _____ Flow rate _____
 Percent mixture _____

BASE METAL
 Material specification type and grade:
 Sheet steel _____ to _____
 Thickness _____
 Support steel _____ to _____
 Thickness _____

FLUX
 Filler metal (Table 5.1):
 Specification _____
 Classification _____

COATING(S)
 Type _____
 Thickness _____

Base metal preparation _____

VISUAL EXAMINATION RESULTS _____ Sketch of Joint Details _____
 Specimen 1 _____
 Specimen 2 _____
 Diameter of arc spot nugget _____
 Test conducted by _____
 per _____
 Lab test no. _____
 Date of test _____

Pass No.	Electrode Size	Electrical Characteristics		Travel Speed	Melting Rate	Wire Feed Speed
		Amperes	Volts			

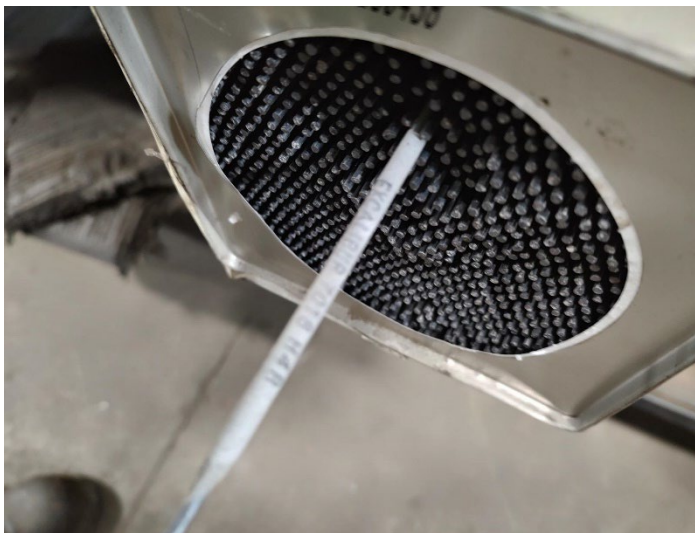
Welder or welding operator name _____
 Identification no. _____ Date of qualification _____
 Welder's social security no. _____

The undersigned certifies that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of AWS D15.1: (_____) Railroad Welding Specification for Cars and Locomotives.
 (year)

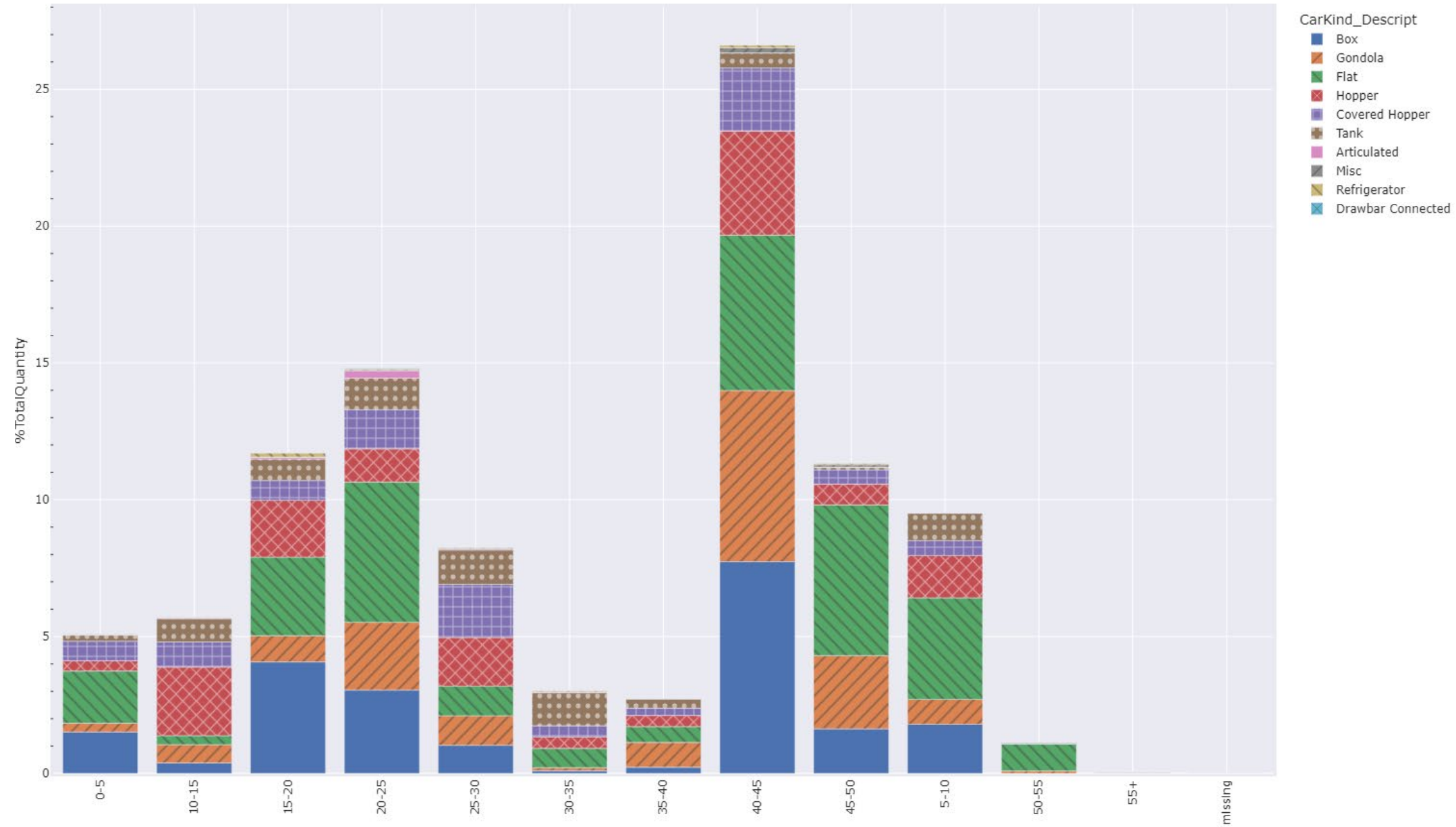
Authorized by _____ Date _____

Si suelda verticalmente hacia abajo, debe crear un nuevo procedimiento.





Rule82 : Welding Proportions By Car-Age and Car-Kinds (2022)





Appendix B.C.5 -- Certification Requirements

Current: 5. When cars are initially assigned to the National Reload Pool, they must be properly equipped by the rack owner and be in serviceable condition. Newly assigned cars may be repaired, modified, or equipped to meet pool requirements by the Pre-Trip Pool Facility after authority from owner has been received. Billing for such work must be against the rack owner separately from the pool billing.

Actual: 5. Cuando los carros se asignan inicialmente al National Reload Pool, deben ser equipados adecuadamente por el propietario del bastidor y deben estar en condiciones de servicio. Los carros recientemente asignados pueden ser reparados, modificados o equipados para cumplir con los requisitos pool por parte del pool de pre-salida, una vez que se haya recibido la autorización del propietario. La facturación de dicho trabajo debe ser contra el propietario del bastidor por separado de la facturación del Pool.

Nuevo Apéndice B.C.5 propuesto: 5. Las instalaciones del Apéndice B, Regla 1 se suspenderán en función de las Inspecciones de certificación de piscinas de M & R realizadas por la AAR o sus agentes si se realizan modificaciones, que se describen como cambios o adiciones a niveles múltiples que no están prescritos o autorizados por la SEFCC. Esto incluye cualquier acción como, entre otras, soldar las puertas de los extremos de varios niveles para cerrarlas, ya que podría dañar cualquier parte del multinivel o causar lesiones al personal. Se suspenderá la certificación de la ubicación del grupo y no se permitirá la facturación del grupo para el ciclo de facturación actual en el que se suspendió la ubicación y no se permitirá hasta el primer día del siguiente ciclo de facturación.



7.1's

B.5. Non-conformances detected on new or reconditioned M-1003 covered products and services must have a M-1003 Quality Assurance Material Non-conformance Report, Form QA-7.1, prepared and submitted to the Quality Assurance Committee Coordinator.

1.5.b(10) M-1003, QA-7.1 Non-Conformance Report, or access to online reporting at <http://aar.iirx.net>.

B.5. Las No-Conformidades o Incumplimientos detectados en productos y servicios nuevos o reacondicionados, cubiertos por la especificación M-1003, deben contar con un Reporte de No-Conformidad o Incumplimiento al Aseguramiento de Calidad M-1003 del Material, Forma QA-7.1, preparado y enviado al Comité Coordinador de Aseguramiento de Calidad.

1.5.b(10) M-1003, Reporte de No-conformidad QA-7.1, o acceso a reportes en línea en la liga <http://aar.iirx.net>.

M-1003 Nonconformance Reporting

Objectives of Nonconformance Reporting:

- Document and provide traceability of an M-1003 covered material or service failure (Activities)
- Document disposition, take corrective action, ensure cause of failure is eliminated, and ensure corrective action is effective and permanent (5-step RCCA process)



AAR Technical Committee and M-1003



M-1003 vs. ISO-9001

M-1003 Quality Standard

- Managed by Railroad Committee
- Specific to the NA Railroad Industry
- AAR Technical Approval, if required
- Subscription to AAR Circular Letters
- Chapter 7 nonconformance reporting
- Audited by an AAR Approved Auditors
- Audit checklist must be used (QAPE)

ISO-9001 Quality Standard

- Managed by European Committee
 - Applies to all Industries (generic)
 - Has no Technical Requirements
 - No RR Industry Information
 - No nonconformance report program
 - Audited by non-Railroad Auditors
 - Audit checklist not required (consistent?)
-
- Audit findings for RR shops with M-1003 certification vs. audit finding in non-M-1003 Shops
 - Shops that were not M-1003 certified had 34% more exceptions (random sampling done by AAR MID)



Thank You

Travel Safe!

Viaje Seguro!





Stephen Berkshire



Chief Inspector / GM – MID

Pagina web: <https://aar.com/standards/mid-index.php>