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Association

REVISED 1920.

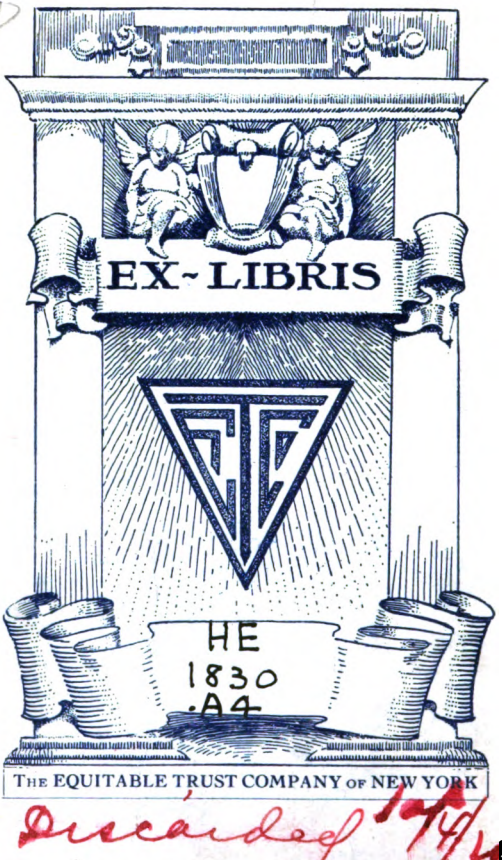
Car Accounting Rules Assoc

Code of Rules

Governing the Condition

and Repairs to, Freight

and Passenger Cars



AMERICAN RAILWAY ASSOCIATION

CODE OF RULES
(M. C. B.)

GOVERNING THE CONDITION OF, AND REPAIRS TO, FREIGHT AND PASSENGER CARS

FOR THE

INTERCHANGE OF TRAFFIC

ADOPTED BY THE

American Railway Association
MECHANICAL DIVISION

REVISED AT

Atlantic City, N. J., June, 1920.

Effective November 1, 1920.

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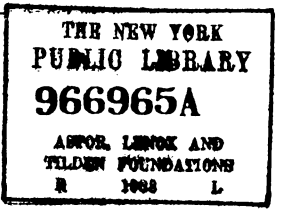


American Railway Association

MECHANICAL DIVISION

Changes

IN

Rules of Interchange

FROM

1919 Code to 1920 Code.

Modifications applying only to railroads under U. S. Federal control eliminated account of termination of United States Railroad Administration:

RULE 2.— New paragraph relative to leaky tank cars added to Section (b), as shown originally in Supplement No. 1 to the 1919 Code of Rules.

New paragraph relative to interchanging of cars using lighting outfits operated by gasoline engines, added.

Reference to A. R. A. Car Services Rule 15 in Section (g) changed to A. R. A. Car Service Rule 14.

RULE 3.— Effective date of Section (d) extended to October 1, 1922.

Effective date of Section (g) extended to October 1, 1921.

Effective date of first paragraph of Section (h) changed to October 1, 1921.

Second paragraph of Section (h) revised to include "transom draft gear."

Effective date of Section (i) extended to October 1, 1922, and rule modified to include "transom draft gear."

Section (m) modified to include "clevis pins."

New Sections (n), (o), (p) and (q) added to this rule.

Note relative to interchanging of industrial or other cars not intended for interchanging service added to this rule.

RULE 4.—The words "before reloading" added to the end of the second paragraph of this rule.

RULE 9.—The requirement for showing markings on axles eliminated.

Required information to be shown when air brakes are cleaned, modified in accordance with revised rules account of single stenciling of air brakes.

RULE 16.—New paragraph added relative to tests of tank car safety valves.

RULE 17.—Two new paragraphs added to Section (c) to govern the application of Type "D" Couplers.

Section (i) modified to include arch bars.

Interpretation No. 2 of the 1919 Rules eliminated.

New Interpretations 5 and 6 substituted for Interpretations Nos. 6 and 7 shown in the 1919 Rules.

New Interpretation No. 7 added.

Interpretation No. 2 transferred from Rule 43 of the 1919 Code.

RULE 22.— Rule modified in accordance with 1919 and 1920 letter ballots.

RULE 23.— New rule added in accordance with 1919 letter ballot.

RULE 32.— Section (d) modified in accordance with report of the Arbitration Committee.

Last paragraph modified in accordance with report of the Arbitration Committee.

New Interpretations Nos. 5 and 6 added.

RULE 43.— Note added to this rule requiring statement in the case of certain damage to foreign cars.

Interpretation No. 1 shown in the 1919 Rules eliminated.

Interpretation No. 2 shown in the 1919 Rules transferred to Rule 17.

New interpretation added relative to responsibility for worn brake heads.

RULE 60.— Rule modified account of letter ballot, 1919, as shown in Supplement No. 2 to the 1919 Rules of Interchange.

Interpretation No. 1, 1919 Rules, eliminated.

Two new interpretations added to this rule.

RULE 66.— New sentence added to first paragraph, requiring that journal box repacking must be done in accordance with A. R. A. Recommended Practice.

Section (a) modified by inserting the following words in the last line, after the word "renewed": "(if necessary) or replaced."

RULE 76.— Modified to provide for the use of tread worn hollow gage.

Figure 4-a added.

RULE 86.— One hundred thousand pound capacity non-Standard axle having 5¼ x 9 inch journal added to table of non-Standard axles.

Additional note added to Section (a) relating to non-Standard 100,000-lb. capacity axle having 5¼ x 9 inch journal.

Limit date in third paragraph of Section (b) extended to October 1, 1922.

Limit date in paragraph 4 of Section (b) extended to October 1, 1921.

First column, table of A. R. A. Standard Axle Limits modified to read "Total Weight on Rail."

Reference in second paragraph of Section (d) changed from Rule 98 to Rule 101.

RULE 91.— Note following second paragraph modified, and reference to roads under U. S. Federal control eliminated.

New paragraph added to Section (a) relative to prompt rendition of bills.

Reference in first paragraph of Section (b) and Section (c) changed from "receipt of bill" to "bill is passed for payment."

Section (f) eliminated; now covered in second paragraph, Section (a).

First interpretation, 1919 Rules, eliminated.

Third interpretation, 1919 Rules, eliminated.

RULE 92.— The following words eliminated from this rule: "except that bills for repairs to leased cars or cars of other ownership shall be rendered direct if so directed in the billing instructions in the Official Railway Equipment Register."

RULE 93.— The word "shall" substituted for the word "must."

New second paragraph added, providing for separate bills for the periodical repacking of journal boxes.

Second paragraph, as shown in the 1919 Rules, modified to provide for separate bills

for the period subsequent to February 29, 1920, and prior to September 1, 1920.

RULE 98.— Entirely revised.

New interpretation added relative to use of Recommended Practice gage for determining service metal.

RULE 101.— Entirely revised.

Several interpretations which are no longer applicable eliminated, and new interpretations added.

Identification table for M. C. B. truss type brake beams corrected and modified to include the Davis Type brake beam.

RULE 106.— Entirely revised.

Second interpretation eliminated.

RULE 107.— Entirely revised.

Interpretations which are no longer applicable eliminated, and corrections made in other interpretations.

RULE 108.— Entirely revised.

List of items for which no labor or material is to be charged, eliminated.

RULE 109.— Entirely revised.

RULE 110.— Eliminated.

RULE 111.— Entirely revised.

RULE 112.— Entirely revised to provide for settlement for all freight cars on basis of present reproduction cost.

RULE 114.— Entirely revised.

RULE 120.— Entirely revised, and labor limits shown in Section (b) modified in accordance with new rates for labor.

Interpretation shown in the 1919 Rules eliminated.

RULE 123.— Reference to "Executive Committee" in first paragraph changed to "General Committee."

RULE 125.— Reference to "Association" changed to "Section."

RULE 126.— Eliminated.

RULE 127.— Reference to "Master Car Builders' Association" changed to "Mechanical Section, American Railroad Association."

RULE 128.— Revised account of adoption of Standard Form of Interchange Rules Agreement.

Second paragraph changed to Rule 129.

RULE 129.— Rule 129 of the 1919 Code eliminated.

RULE 131.— Reference to effective date changed from October 1, 1919, to November 1, 1920.

Standard form, billing repair card, modified to provide sufficient space to show labor hours in tenths; "Cast Iron Column" being eliminated.

Standard form, Record Repair Card, modified to provide sufficient space to show labor hours in tenths; "Cast Iron Column" being eliminated.

Standard form, Statement of Repairs, modified to provide sufficient space to show labor hours in tenths; "Cast Iron Column" being eliminated.

List of subscribers revised to show only those companies who have executed the new form of Interchange Rules Agreement.

Form of Interchange Rules Agreement shown on page 184.

Form of Billing Repair Card, Record Repair Card and Statement of Repairs, shown on pages 179, 178 and 182, revised.

American Railroad Association Car Service Rule 15 changed to Rule 14.

PASSENGER CAR RULES.

RULE 2.— New Section (b) added relative to interchanging of cars using lighting outfits operated by gasoline engines.

RULE 3.— Interpretation shown in the 1919 Code eliminated.

RULE 7.— Section (12) modified to include "cast steel wheels."

RULE 8.— New Section (g) added.

Section (h) entirely revised.

New interpretation added.

RULE 10.— Section (b) revised.

RULE 11.— Rule revised to require mileage report when cars make no mileage.

RULE 13.— Reference to labor rate in interpretation changed in accordance with new rate shown in Rule 21.

RULE 18.— Entirely revised.

RULE 20.— Entirely revised.

RULE 21.— Entirely revised.

RULE 22.— Entirely revised.

CODE OF RULES

Governing the Condition of, and Repairs to, Freight Cars for the Interchange of Traffic.

PREFACE.

These rules make car owners responsible for, and therefore chargeable with, repairs to their cars, except as otherwise provided.

Inspection of freight cars for interchange and method of loading will be in accordance with this Code of Rules, the Specifications for Tank Cars, and the Loading Rules, issued by this Association.

CARE OF FOREIGN FREIGHT CARS.

RULE 1. Each railroad is responsible for the condition of all cars on its line, and must give to all, equal care as to inspection and repairs, regardless of responsibility for expense of repairs.

INTERCHANGING FREIGHT CARS.

RULE 2. Cars having defects for which delivering company is responsible must be properly carded when offered in interchange.

Empty cars offered in interchange must be accepted if in safe and serviceable condition, the receiving road to be the judge. A foreign bad order car previously delivered under load must be received back by the delivering line, providing it has the same defects which existed when it was delivered under load, and is moving empty on its home route. Owners must receive their own cars, when offered home for repairs, at any point on their lines, subject to the provisions of these rules.

Loaded cars offered in interchange must be accepted, with the following exceptions, (a) to (e), inclusive:

(a) Cars (whether loaded or empty) having defects in violation of the Safety Appliance Acts, should not be offered in interchange.

(b) Cars loaded with explosives must be handled in accordance with the regulations of the Interstate Commerce Commission.

Cars containing inflammable liquid which is leaking must be repaired or transferred without any unnecessary movement or at nearest available point.

A leaky tank car shall have stenciled on it, in letters three inches in size, adjacent to the car number, the words "Leaky tank. Do not load until repaired," and the owner shall be immediately notified. Stenciling must not be removed until the tank is repaired.

Cars using lighting outfits operated by gasoline engines will not be accepted in interchange.

RULE 2—*Continued.*

(c) Cars improperly loaded (not complying with the Loading Rules) when transfer or rearrangement of lading is necessary.

Cars of 80,000 lb. capacity and over, equipped with A. R. A. Standard axles, may be loaded to maximum shown in Column "A" of Rule 86, which is the total weight of car and lading for the respective capacities given.

(d) Lading of open cars when dimensions of lading are in excess of published clearances of roads over which the shipment is destined.

(e) When cars can not pass approved third rail clearances or overhead clearances for electrical conductors of the American Railroad Association.

(f) The following defects must be repaired by receiving line while car is under load:

1. Defective wheels and axles under all cars.

2. All other truck defects on home cars.

3. All other truck defects on foreign cars, except metal bolsters, center plates where cast integral with bolsters, metal truck sides, metal truck transoms and metal spring planks; also excepting non-A. R. A. standard journal boxes and contained parts in cases where the A. R. A. standard is not a proper substitute.

4. Defective outside wooden end sills on all cars.

5. Defective body center plate and center plate bolts that do not pass through center

RULE 2 — *Continued.*

sills on all cars, except when such center plates are cast integral with bolster on foreign cars; also center pins that are not applied from inside of car on all cars.

6. Renewal of roof boards of outside wooden roofs, and of inside metal roofs, where such renewal does not exceed 25 per cent of the roof boards, and where purlines, rafters, ridge pole, side and end plates are in good condition, on all cars.

7. Missing or defective side doors (except that an adjustment order may be obtained to apply proper door protection, as required by the Loading Rules), end doors, roof doors and hatch covers on all cars.

(g) A. R. A. Car Service Rule 14 will apply (see page 185) when transfer or rearrangement of lading is necessary.

(h) The car transfer check authorizing transfer or rearrangement of lading to be of the form shown on page 170.

(i) When load is transferred by the receiving line, the car, when empty, if foreign, may be returned to the delivering line, properly side-carded on both sides of car with a bad order transfer, return when empty card, showing the defects for which the car was transferred, in which case it must be accepted. For card see page 172.

(j) When load is not transferred, the car, if foreign, may be returned, when empty, to

RULE 2 — *Continued.*

the delivering line, properly side-carded on both sides of car with a bad order return when empty card, showing the defects for which the car is returned, in which case it must be accepted. For card see page 172.

(k) In rejecting cars account having defects in violation of the Safety Appliance Acts — per Section (a) — or on account of being improperly loaded — per Sections (b) and (c) — or on account of being unable to pass the approved clearances of the American Railroad Association — per Section (e) — also in rejecting defective empty foreign cars, all of the defects objected to must be designated with ink or black indelible pencil on return cards of the form shown on page 171, and placed on both sides of car.

RULE 3. (a) Cars will not be accepted in interchange unless equipped with air brakes having 1¼ in. air-brake pipe and angle cocks; also quick-action triple valve, pressure-retaining valve and an efficient hand brake.

Cars built after January 1, 1919, must be equipped with A. R. A. Standard triple valves.

(b) Cars will not be accepted in interchange equipped with stem or spindle coupler attachments or American continuous draft rods.

(c) Cars built after October 1, 1914, and prior to January 1, 1917, will not be accepted in interchange unless equipped with either the No. 1 or the No. 2 A. R. A. brake beam, as indicated by the light weight of the car; the

RULE 3 — *Continued.*

No. 1 beam must not be used on cars having a light weight in excess of 35,000 lb.

Cars built after January 1, 1917, or cars receiving general repairs after October 1, 1918, must be equipped with metal brake beams of not less than the capacity of the No. 2 A. R. A., or stronger, as the conditions may require.

All of the A. R. A. brake beams referred to shall have the letters "A. R. A." and proper number plainly stamped or cast on strut, as required by the specifications.

NOTE.— Where brake beams already have the letters "M. C. B." stamped or cast on the strut, they will be considered as complying with this rule.

Cars will not be accepted in interchange unless equipped with all-metal brake beams.

After January 1, 1918, all brake beams applied to new cars shall be in accordance, in all respects, with the requirements of dimensions shown on Sheets A. R. A. 17, 17-A and 17-B, Standards.

(d) Cars built after October 1, 1915, with axles other than A. R. A. Standard, will not be accepted in interchange.

Cars built prior to October 1, 1915, will not be accepted in interchange after October 1, 1922, unless equipped with A. R. A. Standard axles.

After October 1, 1920, cars will not be accepted in interchange with axles of less capacity than required by the sum of the light weight and marked capacity of the car.

RULE 3 — *Continued.*

Cars built after October 1, 1920, with journal bearings other than A. R. A. Standard, will not be accepted in interchange.

(e) Tank cars (empty or loaded) will not be accepted in interchange unless they comply with the A. R. A. Tank Car Specifications.

(f) After October 1, 1921, no car carrying products which require for their refrigeration the use of salt with ice and which are equipped with brine tanks will be accepted in interchange unless provided with suitable device for retaining the brine between icing stations.

(g) After October 1, 1921, cars will not be accepted in interchange unless stenciled showing month and year built, or bearing a badge plate giving this information. Cars built prior to 1895 may be stenciled "Built prior to 1895," or bear a badge plate giving this information.

In the case of tank cars the body and tank should bear distinctive dates unless constructed at the same time.

(h) After October 1, 1921, no car will be accepted in interchange unless the body is stenciled light weight and capacity in pounds as provided for in Rule 86. Tank cars shall be weighed and stenciled by the tank car companies only, or by authorized representatives of the tank car companies.

After October 1, 1918, when cars equipped with short draft arms receive general repairs, long metal draft arms extending beyond the body bolster, steel draft members extending

RULE 3 — *Continued.*

full length of car, transom draft gear, steel center sills or steel underframes must be applied.

(i) After October 1, 1922, no car with trucks of less than 60,000 lb. capacity will be accepted in interchange unless equipped with wooden or metal draft arms extending beyond the body bolster, metal draft arms integral with body bolster, metal draft arms extending to metal body bolster and securely riveted to same or transom draft gear.

(j) Refrigerator cars not equipped with door hooks and fasteners to secure the doors in an open position will not be accepted in interchange.

(k) No car will be accepted in interchange unless properly equipped with United States Safety Appliances or United States Safety Appliances, Standard.

(l) All flat cars that can be used for twin or triple shipments of lading, built after January 1, 1918, must have side stake pockets spaced minimum 2 ft. 0 in. and maximum 3 ft. 6 in. After January 1, 1922, no flat car that can be used for twin or triple shipments will be accepted in interchange unless the side pockets are so spaced.

(m) Cars built after January 1, 1919, must be equipped with coupler operating lever connected direct with coupler lock or lock lift without the use of links, clevises, clevis pins or chains.

(n) A car will not be accepted in inter-

RULE 3 — *Continued.*

change if any of its wheels have the letter "C" chipped out of the legend "M. C. B."

(o) Cars built after November 1, 1920, will not be accepted in interchange unless equipped with 6 in. by 8 in. shank A. R. A. Standard Type "D" couplers.

(p) Tank cars, the safety valves of which are due for test within 30 days, will not be received from owners.

(q) Cars on which truck side frames or truck bolsters have been welded on or after January 1, 1920, will not be accepted in interchange if the welding and markings do not conform with instructions in Rule 23.

NOTE.— Industrial or other cars not intended for interchange service, when moving on their own wheels, may be accepted in interchange in their initial movement from manufacturer to destination (or seaboard) without meeting the requirements of Section "A" in so far as the retaining valve and A. R. A. standard triple valve is concerned, second paragraph of Section "C" for No. 2 A. R. A. brake beams, Section "H," "M" and "O," and Specifiations for Tank Cars. To each side of such cars a card shall be attached by shippers, reading as follows:

Industrial or Export Car
shipped in accordance with
A. R. A. Rule 3.
Signed.....
Shipper.

INTERPRETATION. **Paragraph (b). Q.— Please define what is meant by a car equipped with American continuous draft rods.**

A.— A car is considered as being equipped with American continuous draft rods when there is no **ample** auxiliary provision made for taking up the pull in **case** the continuous rods fail. A car with continuous rods **is**

RULE 3 — *Continued.*

not considered as a car equipped with American continuous draft rods when there are auxiliary draft attachments which, in themselves, are ample to withstand the pulling strain, without the loss of coupler, providing the continuous rods fail.

Paragraph (b). Q.— What course should be taken with a foreign car equipped with American continuous draft rods? Has the handling line the right to apply any make of draft gear, or should they inquire of car owner what the standard is, and place order for the material if necessary?

A.— The standard of the handling line can be applied to the car without consulting the car owner, in order to avoid delay to the car.

Paragraph (e). Q.— A question has been raised as to the exact meaning of Section 23 of the Tank Car Specifications, governing the retests of tanks of Classes I, II, III, IV and V Tank Cars.

A.— That part of Section 23 of the Standard Specifications for Tank Cars which requires that the tanks be retested hydraulically at certain intervals has been suspended as to tanks for which such tests shall become due prior to January 1, 1920, except, however, when cars are shopped for repairs, the tank shall be retested as follows:

	First Retest After Building of Tank.	Other Retests Every
	YEARS.	YEARS.
Class I	Time expired	5
Class II	10	5
Class III	10	5
Class IV	5	5
Class V	2	2

For Classes II and III tanks used for the transportation of corrosive products (chemicals, such as acids, ammonia liquors, etc.), where deterioration is to be expected in a shorter time, the first retest after building shall be at the expiration of five years.

Any tank damaged to the extent of requiring patching or renewal of one or more sheets, or extensive

RULE 3 — *Continued.*

reriveting or recaulking, shall be retested before being returned to service, and the tank shall again be retested five years after this date, without taking into consideration the date built or date of previous retest, if any.

The requirements of Section 23 of each of the Specifications named, that new tanks shall be tested before being put into service, and that tanks damaged to the extent of requiring patching or renewal of one or more sheets, or extensive reriveting or recaulking of seams, shall be retested before being returned to service, are not suspended.

The Specifications exempt from all pressure test requirements wooden or glass lined tanks, or tanks specially designed for transportation of solids.

Paragraph (e). Q.—A question has been raised as to the necessity for testing safety valves of cars carrying certain commodities.

A.— If a tank car is equipped with safety valves, the valves must be tested and the record of the test stenciled on the tank, as required by the Tank Car Specifications, regardless of the commodity carried.

Q.— Item 17 of the Specifications for Tank Cars reads as follows:

"Trucks.— The trucks, as a whole, shall be equal in strength to the carrying capacity of the axles. Wheels, axles, journal boxes, journal bearings, center plates, etc., shall be in accordance with A. R. A. Standards and Recommended Practice."

Does this mean that the various parts mentioned, also the arch bars, must be according to the design as shown in the specifications of the A. R. A. Standards and Recommended Practice?"

A.— Wheels, axles, journal bearings and wedges; also arch bars, journal boxes in arch bar trucks and separate center plates when used on cars constructed after July 1, 1917, should be in accordance with A. R. A. Standards and Recommended Practice. Integral side frames must be of equivalent strength to A. R. A. construction, and integral center plates, if used, must have the dimensions of bearing and depth of contact specified by A. R. A. Standard practice.

USE OF DEFECT, ORIGINAL RECORD OF REPAIRS, BILLING REPAIR AND JOINT EVIDENCE CARDS.

RULE 4. If a car has defects for which the owners are not responsible, the receiving line shall require that a defect card be securely attached to the car, as per Rule 14.

Defect cards shall not be required for any damage so slight that no repairs are required nor for raked or cornered sheathing, roof boards, fascia, or bent or cornered end sills, not necessitating the shopping of the car before reloading.

At outlying points where joint inspection is not in effect, the matter will be left to the judgment of the receiving line. Where chief joint interchange inspectors are employed, the decision will be made by the chief interchange inspector. Use of Defect Card.

Defect cards shall not be required for missing material in fair usage from cars offered in interchange. Neither shall they be required of the delivering company for improper repairs that were not made by it, with the exception of the cases provided for in Rules 56, 57 and 70.

RULE 5. Defect cards must be of the form shown on page 171. They must be of cardboard, printed in red ink on both sides, and must be filled in on both sides with ink or black indelible pencil. The cards must plainly specify in full each item for which charges are authorized, indicating the location of defects, as provided for in Rule 14.

RULE 5 — *Continued.*

To justify bill, repairs authorized by defect card must be made within two years from date of first receipt of car on home line, except wrong repairs, which must be corrected within nine months from date of first receipt of car on home line.

Use of Defect Card.

RULE 6. Any road making partial repairs of defects on a car which are covered by defect card will have the defects repaired crossed off the original card with ink or indelible pencil and card replaced on car. A copy of the card accompanying the bill with the defects which were not repaired crossed off will be sufficient authority to bill.

RULE 7. When repairs are made to a foreign car (except as otherwise provided in Rule 108), or to any car on the authority of a defect card, a form shown on page 177 shall be used for original record of repairs, from which the billing repair card shall be made.

Use of Original Record of Repairs.

This form embodies the minimum information required for the proper preparation of billing repair cards. Additions may be made to this form and its size made to suit the requirements of any company. This form of original record of repairs may be in book form if so desired.

A card similar to the above in its essential requirements, upon which repairs to more than one car may be recorded, may be used for recording minor repairs made in transportation yards.

RULE 7 — *Continued.*

In recording repairs upon the original record the following requirements must be observed:

(1) Cars shopped for repairs must be carefully inspected by an authorized person before work of repairing is begun, and all work authorized by him must be entered upon the original record, including the location of each item of repairs and the exact reason or cause for making repairs. This information must not be assumed, but must be determined by an actual inspection. The common terms "broken," "bent," "missing," etc., if used, when caused by derailment, cornering, sideswiping, or other causes shown in Rule 32, must be qualified to show such cause.

Use of Original Record of Repairs.

(2) Special care must be taken to obtain a correct account of the material actually used.

The finished sizes of lumber as applied to the car must be shown on original record; feet, board measure, need not be shown.

The number and size of bolts, and purpose for which they are used, must be shown upon original record; the weights need not be shown. Nuts must be specified, except those used on bolts renewed, in which case an average of one nut per bolt will be assumed as used, regardless of whether double nuts are used.

The actual weight of forgings, structural or pressed steel shapes and weight and kind of castings must be shown on original record

RULE 7 — *Continued.*

in space provided, except where weight of same is accurately determined by definite description.

Paint and nails must be shown on original record; quantity need not be shown in those cases where it can be properly determined by the billing clerks.

(3) All items carrying labor charges must be covered in proper detail on the original record; the time or money charges (as per Rules 107 and 111) need not be shown. For items of labor computed on the rivet basis, the number and diameter of rivets must be shown on original record. For items of labor for straightening or repairing, computed upon weight basis, the weight of material must be shown on original record.

Use of Original Record of Repairs.

(4) The original record must be signed by the authorized person making original inspection and the person making the complete inspection or by other authorized person making the original record, to vouch for the correctness of same.

The original records covering minor repairs made in transportation yards must be signed by either the person inspecting the repairs or by the workman who repairs the car.

All corrections made on original record must be made by the person or persons who have vouched for the correctness of the original record by their signatures.

These original records must be kept on file, for ready reference, preferably either at point

RULE 7 — *Continued.*

where repairs are made or point at which billing repair cards are made, for a period of one year, after which they may be stored in accordance with local regulations.

Use of Original Record of Repairs.

The billing repair cards must check with the original record of repairs, in so far as they should properly check as regards the details of charges.

NOTE.— The present forms of original record may be used until present stock is exhausted.

RULE 8. When repairs of any kind are made to foreign cars a billing repair card must be furnished car owner, except as otherwise provided for in Rule 108. This card must specify fully the repairs made, the reason for same, the date and place where made and name of road making repairs; also show location of parts repaired or renewed, as per Rule 14.

Use of Billing Repair Card.

When repairs of any kind are made to cars of private ownership, where such cars are equipped with suitable receptacle, a copy of the billing repair card shall be inserted in such receptacle. The loss of such card from the receptacle referred to will not invalidate bill for the repairs. This receptacle to be applied by owner at any convenient location on car, provided the location selected will not require inspectors or repairmen to go underneath or between the cars.

When repairs are made to any car on authority of a defect card issued by other than

RULE 8 — *Continued.*

owner of car, in addition to the billing repair card furnished the car owner, a separate billing repair card must accompany the defect card. This separate billing repair card must show repairs made, details of charges, date and place where repairs were made; also show reference to name or initials of road issuing defect card and date issued.

If no bill is to be rendered, the billing repair card must be attached to the monthly bill, with the words "no bill" written across the face of the card, in which case the cards must be entered in the billing statement in the first four columns, with the notation "no bill" in the fifth column for reference.

Use of Billing Repair Card.

The billing repair card shall be made in duplicate, the original to be known as the billing repair card and the duplicate to be known as the record repair card, and to be of the forms shown on pages 178, 179, 180 and 181, all items of repairs to be in handwriting or typewriting.

NOTE.— Use of present forms, if not conforming to recommended forms shown on pages 178 to 181 may be continued until stock is exhausted.

INTERPRETATION. Q.— Where 8-in. truck springs are shown on repair card and card goes to A. R. A. bill clerk without weight, is charge for double coil springs proper?

A.— If double coil spring was actually applied account of *both* coils defective or missing, it may be so charged. No information for repair cards or record should be assumed.

RULE 9. The following information must be specified on billing repair cards:

A. R. A. couplers, or parts thereof, R. and R. .....
- New or secondhand.
- Size of shank.
- (Where 12¼-in. head coupler or A. R. A. type D coupler is removed or applied, it must be so stated.)
- Riveted yoke or key attachment.

Wheels and axles, R. and R. .....
- Cast-iron, cast-steel, wrought-steel or steel-tired wheels.
- New or secondhand.
- Cause of removal (see Rule 10).
- A. R. A. or non-A. R. A. length of axle, diameter and length of journal, diameter of wheel fit, diameter of center of axle. (Only one dimension for length of journal, diameter of journal or diameter of wheel fit to be given, which shall be the dimension nearest the condemning limit.)
- **All markings on wheels.**— If no marks are found on same, a notation to that effect must be made.
- **Box number (see Rule 14).**

Use of Billing Repair Card.

Journal bearings....
- New or secondhand (relined journal bearings are considered as new).
- Solid, filled or other kind, R. and R.
- Length of journal.
- Box number (see Rule 14).

Journal boxes.— Periodical repacking, per Rule 66.....
- Length of journal. Date previously repacked or "No date."

Metal brake beams, R. & R. .....
- New or secondhand, applied.
- If A. R. A. and number of same, or non-A. R. A.
- Make or name.
- Cause of removal.

Brake shoes, applied.
- New or secondhand.
- Cast or reinforced back.

RULE 9 — *Continued.*

Air brakes cleaned...	Make and type of triple valve R. & R. Name of road and date of last previous cleaning. Work performed, per Rule 60.
Air hose applied.....	New or secondhand.
General	Weight of forgings, castings, etc. Finished sizes of lumber. Feet of lumber. Value of miscellaneous items. Hours of labor. (The above information to be shown opposite each item, except where no bill is rendered.)

Use of Billing Repair Card.

When lead paint is used, it must be so specified.

When triple valve and cylinder are cleaned, the initial of road and date of last previous cleaning must be shown.

If necessary to remove load to make repairs, as specified in Rule 107, it must be plainly stated.

When tank or safety valve of tank cars is tested in accordance with the A. R. A. Specifications for Tank Cars, the certificate of test, as required by the Interstate Commerce Commission regulations, must accompany the billing repair card.

INTERPRETATION. Q.— Is it necessary to show the dimension for over-all length of axle, in addition to showing whether A. R. A. or non-A. R. A. length?

A.— No, the over-all dimension need not be shown.

Q.— Is it necessary to show how much of the flange, tread, rim, etc., is defective on wheels removed? Is the term "worn flange" or "chipped flange" sufficient without showing how thick the flange is when removed or how long the chip is?

A.— For cast-iron or cast-steel wheels it is unnecessary to show any dimensions or qualify the terms in any

RULE 9 — *Continued.*

way, as it is assumed that the repairing line would not remove the wheels unless the defects were beyond the limit of safety.

In so far as wrought-steel wheels are concerned, it is necessary to furnish the information specified in second paragraph of Rule 10.

RULE 10. In noting the cause of removal of wheels and axles, the terms used in Rules 68 to 86, inclusive, shall be used.

In all cases of wrought-steel wheels, the actual thickness of tread must be shown before and after turning off, measured from base line of tread to the condemning limit of tread, which is ¼ in. above the witness groove; also show actual thickness of tread on other wheels applied. This information must be reported to car owners regardless of whether or not repairs are chargeable to owners.

Use of Billing Repair Card.

RULE 11. Journal bearings having a babbitt lining ⅜ in. thick or thicker, shall be charged as filled journal bearings, and not as solid journal bearings.

RULE 12. The evidence of a joint inspector, or the joint evidence of two inspectors, one representing the owner of the car and the other representing a railroad company, subscriber to the A. R. A. Interchange Rules, that the repairs are not proper, shall be final; the evidence to be signed only after an actual inspection has been made.

Use of Joint Evidence Card.

A joint evidence card shall be used for this purpose, which shall describe and show loca-

RULE 12 — *Continued.*

tion of parts repaired or renewed, as per Rule 14. This card shall be of the form shown on page 173.

If repairs are not corrected at the time of inspection, the joint evidence card shall be attached to the car, as per Rule 14.

Joint evidence must be obtained within 90 days after first receipt of car home and said joint evidence shall not be valid unless used within 16 months from date of issue.

Use of Joint Evidence Card.

The joint evidence may be obtained at any point on the home line at which the improper repairs are found, but preferably at the point where the car is received, and only after an actual inspection is made.

RULE 13. The joint evidence card showing copy of billing repair card, covering wrong repairs, when wrong repairs have been corrected, shall be sent to the company issuing such billing repair card. If within sixty days from the date of such request the latter does not issue its A. R. A. defect card covering, bill made on copy of joint evidence and copy of billing repair card shall be final authority, provided the wrong repairs mentioned on joint evidence card are covered by such billing repair card. It must be stated on back of joint evidence card where and when the wrong repairs were corrected.

RULE 14. The end of car toward which the cylinder push rod travels shall be known as B end and the opposite end shall be known as A end.

Facing the B end of car, in their order on the right side of car, wheels, journal boxes and contained parts, shall be known as R1, R2, R3 and R4, and similarly those on the left side of car shall be known as L1, L2, L3 and L4.

Defect cards and joint evidence cards must be securely attached to the car with at least four tacks, preferably on the outside face of intermediate sill between cross-tie timbers on wooden cars, and on steel cars to cardboard located either on cross tie under car or on inside of side sill at the end of car.

RULE 15. Duplicate defect, billing repair or joint evidence cards must be furnished promptly, on request, for lost or illegible cards.

GENERAL INSTRUCTIONS.

RULE 16. Any car having defects which render it unsafe to run, unsafe to trainmen, or to any lading suitable to the car, may be repaired.

Repairs to foreign cars shall be promptly made, and the work shall conform in detail to the original construction, and with the quality of material originally used, except as provided for in Rules 17, 18, 87, 114 and 120.

A road having in its possession a tank car due for test of safety valves must make such tests in accordance with the tank car specifications, billing the owner for the cost of same.

RULE 17. In repairing foreign cars.

(a) Defective non-A. R. A. Standards may be replaced with A. R. A. Standards (which must comply with A. R. A. specifications), provided such substitution does not impair the strength of car. Any increased cost resulting from and any expense of alteration necessary for the application of such A. R. A. Standards shall be charged to car owner. Scrap credits are to be allowed for undamaged parts thus removed.

(b) Malleable iron, wrought iron or steel A. R. A. Standards may be substituted for each other or for gray iron A. R. A. Standards. Gray iron A. R. A. Standards applied in lieu of malleable iron, wrought iron or steel A. R. A. Standards shall be considered as wrong repairs.

(c) In replacing A. R. A. Standard couplers, A. R. A. type D couplers or A. R. A. Temporary Standard couplers, the dimensions of shank and butt of A. R. A. couplers standard to the car must be maintained, except that 9⅛ in. butt may be substituted for 6½ in. butt when used with A. R. A. standard yoke in substitution for non-A. R. A. standard yoke.

Existing cars, equipped with former standard couplers having 5 in. by 7 in. shanks, when requiring renewals, shall have 5 in. by 7 in. shank A. R. A. Standard Type "D" couplers applied.

NOTE.—This rule to be effective when present stock of former standard 5 in. by 7 in. shank couplers has become exhausted.

RULE 17 — Continued.

Existing cars equipped with 5 in. by 5 in. shank couplers shall have the existing type of couplers maintained in repairs. Where changes are made in the design of draft arrangement, provision should be made for the application of either the 5 in. by 7 in. or 6 in. by 8 in. shank A. R. A. Standard Type "D" coupler.

(d) If the car owner elects, on account of improper repairs, to remove an A. R. A. Standard coupler, A. R. A. type D coupler or A. R. A. Temporary Standard coupler in good condition, secondhand credit should be allowed, and charge be confined to secondhand coupler applied.

(e) A. R. A. No. 2 brake beams may be used in repairs to all freight equipment cars equipped with A. R. A. No. 2, A. R. A. No. 1 or non-A. R. A. brake beams. Any increased cost resulting from the application of No. 2 brake beams to be borne by the car owner. A. R. A. No. 3 brake beam must be replaced in kind.

(f) Billing repair card must specify kind of material applied and removed, and bill rendered in accordance therewith.

(g) Cast-iron brake shoes may be replaced with brake shoes having reinforced back and the increased cost charged to party responsible for the repairs.

(h) White pine, yellow pine, fir or cypress may be used when repairing siding, when of equal grade or quality to the material standard

RULE 17 — *Continued.*

to the car. Fir, oak or southern pine may be substituted for each other in the renewing or splicing of longitudinal sills and side plates. Oak and southern pine may be substituted for each other in renewing end plates. Fir and southern pine may be substituted for each other in renewing or splicing end plank and side plank.

(i) Arch bars, brake shafts, sill steps, uncoupling levers and grabirons must not be welded.

Cotter keys are not to be applied to knuckle pins of couplers on cars other than hopper and fixed-end gondolas.

INTERPRETATION. (1) Q.— Does the substitution of a New York auxiliary reservoir and cylinder in place of Westinghouse constitute wrong repairs?

A.— The substitution is permissible, inasmuch as these details are interchangeable and are of the same dimensions, and the substitution of one for the other is not wrong repairs.

(2) Q.— Will it be necessary to stencil cars equipped with the D type of coupler in order to protect them against substitution of the present type of coupler?

A.— Yes.

(3) Q.— Is it permissible to charge for cast steel for bottom brake rods applied to foreign cars when wrought iron is standard to same?

A.— Inasmuch as the Association has a standard bottom connection, it is permissible, under Rule 17, to make use of cast steel in this connection. The charge should be on the basis of material applied and the credit on the basis of material removed. See Section (f) of Rule 17.

RULE 17 — *Continued.*

(4) Q.— Is it permissible to charge for cast steel when cast-steel column castings are applied in place of malleable iron standard to the car?

A.— Cast steel may be substituted for malleable iron, but the charge should be limited to the kind of material removed. This Association has no standard column casting.

(5) Q.— Does the replacement of A. R. A. Standard K-1 and K-2 triple valves with valves of any other type constitute wrong repairs for which defect card should be issued?

A.—Yes.

(6) Q.— Does the substitution of A. R. A. Standard K-1 and K-2 triple valves for valves of other types constitute wrong repairs for which defect card should be issued? If not, what should be the basis for charge and credit?

A.— No. A. R. A. Standard K-1 and K-2 triple valves may be substituted for any non-Standard valves if applied to proper size equipment. In the substitution for any convertible non-Standard valve, the charge and credit shall be on the basis of the conversion price ($10.00) plus allowance for removing, repairing and replacing triple valves, as per Item No. 29, Rule 111. In the substitution for non-convertible valves on cars built prior to January 1, 1915, charge and credit shall also be on the same basis. In the substitution for non-convertible valves on cars built on or after January 1, 1915, charge and credit shall be on basis of prevailing price for K valves, plus A. R. A. average price for removing, repairing and replacing, as per Item No. 29, Rule 111, with average scrap credit ($1.00) for non-convertible valve removed. When Standard A. R. A. valve K-1 or K-2 is applied to replace any non-Standard A. R. A. valve, the stenciling on car body showing valve standard to the car must be changed to conform to valve applied, for which ½ hour labor may be charged.

When any valve applied is of different type from that removed, or from that standard to the car, the

RULE 17 — *Continued.*

billing repair card must also show valve standard to the car, as indicated by the stenciling on car body; also show date built for car on which K-1 or K-2 valve replaced any non-convertible valve.

(7) Q.— In view of interpretation No. 4, Rule 17, permitting the use in repairs to foreign cars of cast steel truck lever connections of any section equal in strength to the section of wrought iron or steel specified on Standard Sheet 18, is it permissible to likewise use the hollow Schaeffer one-piece open hearth steel, drop forged, or other manufactured connections, meeting the strength requirements?

A.—The substitution of the Schaeffer patented brake lever connection does not constitute wrong repairs. If this connection is not the car owner's standard charge for same should not exceed cost of that of owner's standard.

(8) Q.— Is the patching of cast-steel side frames permissible?

A.— The patching of cast-steel side frames is considered bad practice and should be prohibited.

(9) Q.—Are special steels, or alloy steels, considered to be the equivalent of and permissible in substitution for malleable or gray iron A. R. A. standards?

A.— Yes.

(10) Q.— When substitution of different makes of A. R. A. metal brake beams necessitates changes in brake hangers or connections, is the company making the repairs liable to the car owner for wrong repairs on account of these hangers, etc., being different from that standard to the car?

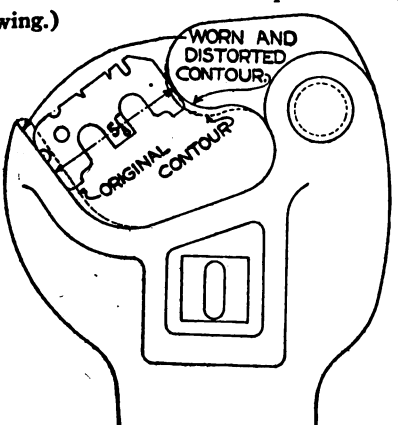
A.— The Association has no standard method of hanging beams, and until such a method is adopted the standard to the car must be maintained.

INTERPRETATION. Q.— Owing to the great demand for equipment, it has become necessary in a number of cases to repair truck bolsters by riveting patches, which makes a reasonably substantial job. Is it proper to bill car owner for this work?

RULE 17 — *Continued.*

A.— The patching of bolsters generally is not considered good practice. However, in the case of pressed steel bolsters, patching of flat surfaces or tension side, by riveting on plates, in a substantial manner, is permissible, and may be considered permanent repairs.

RULE 18. Couplers that exceed the distance of 5⅛ in. between point of knuckle and guard arm, measured perpendicularly to guard arm, must have the defective part or parts renewed to bring coupler within gage, in which case owners are responsible. (See drawing.)



When A. R. A. couplers of another make are applied to a car, the uncoupling arrangement shall be made operative at the expense of the company making the repairs.

RULE 19. In making repairs to foreign cars, the following materials must not be used:

Cast-iron brake wheels.

Malleable iron couplers.

Open knuckles.

Malleable or steel-backed journal bearings.

RULE 20. Cars must be maintained within the limits of standard height for couplers, measured from the top of the rails to the center line of coupler head. As far as possible, cars should be adjusted when empty.

When construction of car and trucks precludes the common methods of adjusting coupler heights, the application of metal shims between journal boxes and arch bars will be permissible.

The use of liners between male and female portions of center plates is prohibited where the vertical bearing surfaces are reduced.

Empty cars measuring 32½ in. or less shall be adjusted to 34½ in., or as near as practicable thereto, but not exceeding 34½ in. Loaded cars measuring 31½ in. or less shall be adjusted to 33½ in., or as near as practicable thereto, but not exceeding 33½ in. When bill is to be rendered, the height of car before and after altering must be shown on billing repair cards.

RULE 21. Bills may be rendered against car owners:

(a) For the cost of applying temporary running boards and hand rails to cars originally equipped with roofs or running boards, to make

RULE 21 — *Continued.*

such cars safe for trainmen, when owners are responsible for the defective condition of the roof; also for the cost of applying temporary hand railings to, or boarding over the opening on, empty well-hole cars.

(b) For applying temporary transverse tie rods to cars with sides spread or bulged beyond the clearance limits of the handling line.

RULE 22.

FOR CARS HAVING WOODEN SILLS.

Draft timbers must not be spliced. Longitudinal sills must not be spliced between or over cross-bearers.

Longitudinal sills (intermediate or side sills) may be spliced at both ends, on either side of body bolster. The nearest part of the splice must not be less than 12 in. from edge of body bolster. Intermediate sills, spliced between body bolster and cross-bearer, must be reinforced as per Figs. 11 or 11-A. Intermediate sills, spliced between bolster and end of car, and side sill, spliced on either side of bolster, must be in accordance with Figs. 10 or 10-A, preferably the latter.

When splicing or renewing any longitudinal sill, reinforcement shall be applied to all existing non-reinforced splices, in all sills except side sills and intermediate sills between body bolster and end of car. If the old splice is a four-bolt splice, it shall be reinforced in accor-

RULE 22 — *Continued.*

dance with Figs. 11 or 11-A. If the old splice is a three-bolt splice, the reinforcement shall be applied in accordance with Fig. 15.

Center sills shall be spliced only between body bolster and cross-tie timber. The nearest part of the splice must not be less than 24 in. from edge of body bolster. Center sill splices shall be in accordance with Fig. 11.

The diameter of horizontal or vertical splice bolts shall be ⅝ in.

FOR CARS HAVING STEEL CENTER SILL SPLICES LOCATED AT LEAST 7 IN. FROM FACE OF BOLSTER:

Adjacent sills may be spliced.

All splices shall be of the butt-joint type, reinforced on both sides by plates of not over 24 in. in length, and not less than twice the length of the protruding end when the projection is less than 12 in. The reinforcing plates shall be at least as thick as the web of the sill. The splice plate on the flange side of the sill shall be U-shaped, to include flanges, while the plate on the opposite side shall cover the web only. Rivets to be spaced as shown in Figs. 12 and 12-A.

Where autogenous welding is available, the sills may be welded after riveting the U-shaped plate on the flange side, omitting the flat plate on web side.

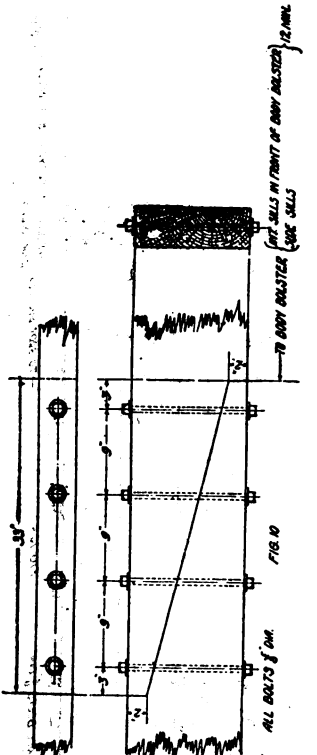
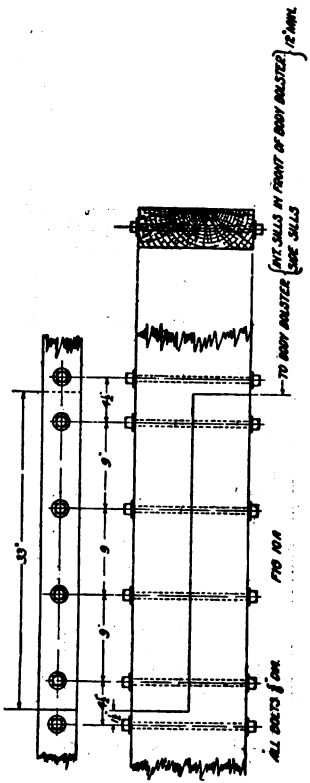
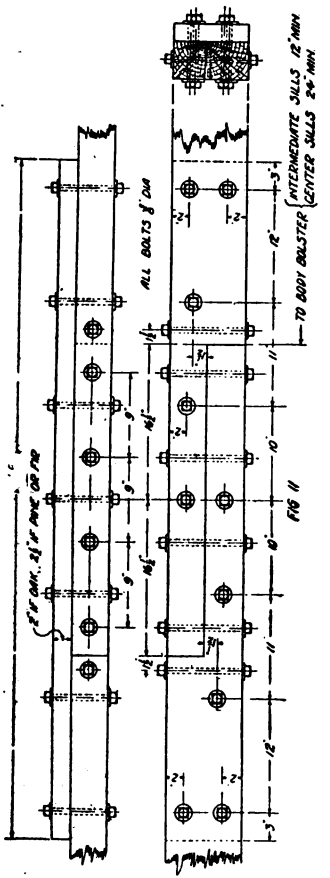
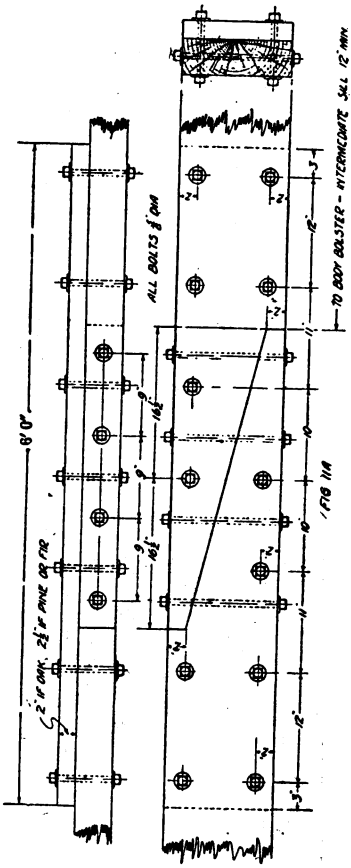
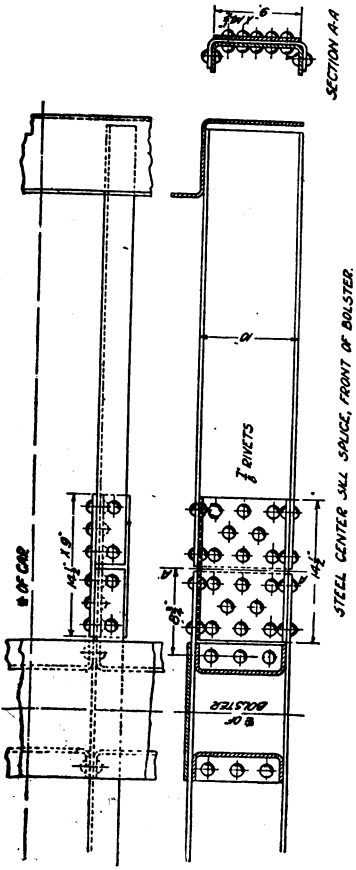


FIG 10

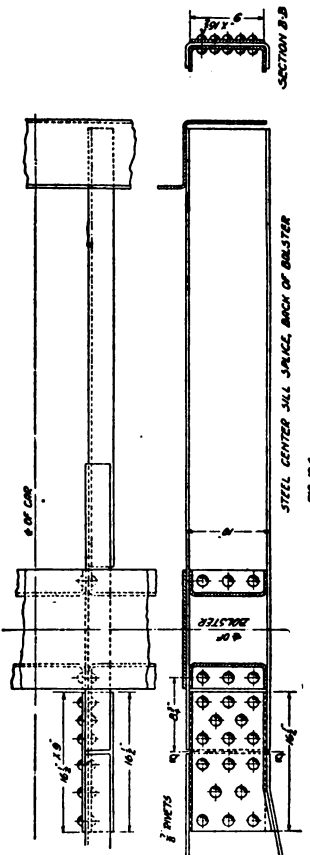


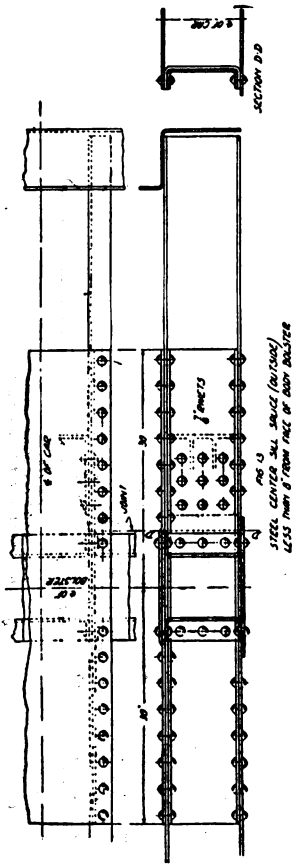


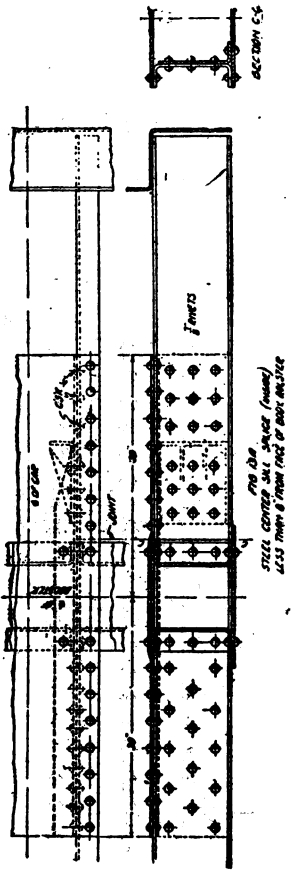


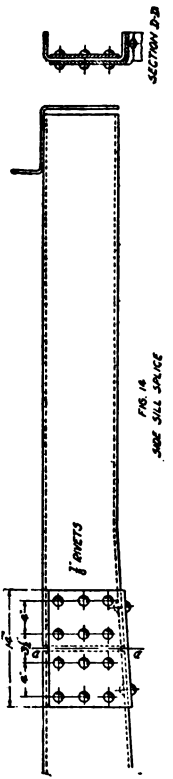


STEEL CENTER SILL SPLICE, FRONT OF BOLSTER.
FIG 12.









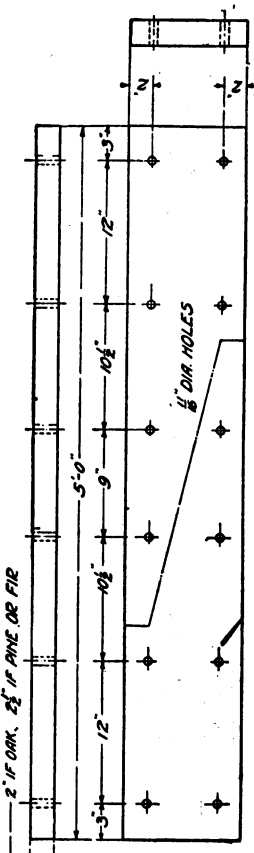


FIG. 13.

CENTER AND INTERMEDIATE SILL THREE BOLT SPLICE REINFORCEMENT.

For Cars Having Steel Center Sill Splices Located Between Body Bolster and End Sill, and Less Than 8 in. From Face of Bolster:

All splices shall be of the butt-joint type, with the addition of a cover plate.

The splice plates shall be at least as thick as the web of the sill. They may be located on either side of the sill, extending forward and back of the center line of bolster 30 in., as shown in Figs. 13 or 13-A.

The rivets shall be spaced as shown.

Side Sill Splices.

All splices must be of the butt-joint type, reinforced on both sides by plates 14 in. long. The reinforcing plates shall be at least as thick as the web of the sill. The splice plate on the flange side of the sill shall cover the web only, while the plate on the opposite side shall be flanged over the bottom leg of the side sill, and riveted to the same, as shown in Fig. 14. The splice may be located on either side of the body bolster.

The rivets shall be spaced as shown.

Side sills may also be welded by the autogenous process, making the thickness of the metal through weld one and one-half times the thickness of the metal in the sill, in which case the reinforcing plates and rivets shown in Fig. 14 may be omitted.

Rule 23. Autogenous welding, by either gas or electric process, when performed must be

RULE 23 — *Continued.*

strictly in accordance with the following limits and regulations.

AUTOGENOUS WELDING LIMITS AND REGULATIONS.

I. General.— In welding, either by the use of gas or electricity, care and good judgment on the part of the operator are of prime importance. The operator's ability as to the desired proficiency should be certified by the mechanical officers in charge or by an instructor qualified by experience in general railroad welding with the method involved.

The metal added is liable to be porous and relatively brittle.

The heat at the surfaces welded affects other sections near the weld, tending to reduce strength and toughness.

The following general rules must, therefore, be carefully observed:

II. Welding cracks or fractures will not be permitted on the following:

Axles.
Arch bars.
Car wheels or tires.
Grab irons.
Truck equalizers.
Sill steps.
Spring or bolster hangers.
Brake staffs.
Brake wheels.
Coupler bodies, knuckles, knuckle pins, locks, lifters and throwers.

RULE 23 — *Continued.*

Parts made of alloy steel or heat treated carbon steel. Top chord angles of open top all-steel cars if the fracture is located at a point between bolsters more than 5 ft. from the center line of either body bolster.

III. Building up worn surfaces will be permissible on the following:

Parts subject to compression only.

*Spring or bolster hangers.

*Holes in levers.

†Center plates.

†Truck sides, bolsters and column castings.

Journal boxes.

*Provided that the material remaining in part is equal to at least 80 per cent of the original section.

†Provided that the material remaining in part is equal to 60 per cent of the original section.

Coupler bodies, knuckles, locks, lifters and throwers. After building up to the original section, the same must be dressed and then checked with proper gages to insure interchangeability and proper operation.

IV. Welding cracks or fractures will be permitted on the following:

Parts subject to compression only, and general car parts not subject to high tension strains, except as otherwise prohibited.

Car and roof sheets.

*Cast steel truck sides.

*Pressed and structural steel truck sides, bolsters and transoms.

*Cast steel bolsters.

RULE 23 — *Continued.*

Draft castings.

*Brake beams.

*Cast steel coupler yokes.

Car sills, posts, braces, stakes, carlines, side plates and end plates.

*Welding is permitted only when the area of the crack is less than two-fifths, or 40 per cent, of the total area through the section at the point of fracture, but it is not permissible to weld any crack located within 6 in. of an old weld.

V. Regulations for Welding:

(a) All parts marked (*) in Section IV, except truck transoms, must not be welded unless removed from car or truck. Truck transoms may be welded in place by removing the truck from under car body.

(b) The edges of pieces for welding must be prepared as shown in Figs. 1 and 2. If both sides of the fractured member can be worked upon, the fracture should be prepared as per Fig. 1, and where only one side of the fractured member is accessible Fig. 2 should be followed. The entire crack should be burned or chipped out far enough back so that there will be no portion of the crack in the metal. Failure to do this permits the check or crack to work its way across the metal to the farther side, due to the constant vibration, even after the weld has been made. A hole may be drilled at the end of crack or check and chip or burn towards the hole. The surfaces where new material is to be deposited must be clean and bright and reasonably smooth, and, therefore, if the sur-

A SHOULD BE SLIGHTLY GREATER THAN DIAMETER OF PENCIL

RULE 23 — *Continued.*

faces are prepared by the burning process the surfaces must be finished by chipping before welding.

(c) The portion of the part adjacent to the fracture should be heated before the welding is begun. In welding, the operator should begin to weld at the point farthest away from the outside edge and work the weld towards the edge. All efforts must be made to prevent oxidizations, and to accomplish this the work should be placed at an angle that will allow the blowing out of all slag or impurities in the fused metal, and by giving the torch a rotary movement it will assist in their removal.

(d) The new material must be deposited to the form shown in Figs. 3 or 4 in order to properly reinforce the weld, and "B" should be somewhat greater than "T." For the important items marked (*) in Section IV, as well as for car sills, posts, braces, stakes, carlines, side plates and end plates, "B" must be at least one and one-half times "T."

(e) The parts marked (*) in Sections III and IV, with the exception of truck transoms welded in place, must be carefully annealed by uniformly heating to approximately 1400 or 1500 deg. Fahrenheit and allowed to cool slowly in the atmosphere.

(f) Worn surfaces permitted to be built up to the original section by depositing of new metal thereon must first be made clean, bright and fairly smooth, and, after the metal is de-

WHEN PIECE IS SUBJECT TO HIGH TENSION B MUST BE MORE THAN 1½ T

RULE 23 — *Continued.*

posited, must be dressed to the required dimensions and gaged where necessary.

(g) When truck side frames and bolsters are welded the weld must be made smooth and the following record legibly stamped on the weld by at least ⅜ in. steel stencils, in the following form:

(Mo.-Day-Yr.)	(Railroad)
0 — 0 — 0	A. B. C.
XY	X
(Shop abbreviation mark.)	(Welder's identification number or mark.)

RULE 24. Wheels on the same axle must be of the same circumference.

In no case should two wheels be mounted on the same axle when the thickness of the two flanges together will exceed the thickness of one normal and one maximum flange, or 2 17-32 in.

RULE 25. New wheels must not be mated with secondhand wheels.

RULES 26-29, inclusive. Vacant.

RULE 30. (a) All freight cars shall be lightweighed as follows, and shall be marked in accordance with A. R. A. Interchange Rules with the following marks:*

* Tank cars shall be weighed and stenciled by the tank car companies only, or by authorized representatives of the tank car companies.

RULE 30 — *Continued.*

(1) The light weight, which shall be the multiple of 100 lb. nearest the scale weight, except that when the scale weight indicates an even 50 lb., the lower multiple shall be used.

(2) Capacity in pounds. Cubical capacity, except for flat and tank cars.

(3) Station symbol.

(4) Date of weighing, month and year.

(b) Each new car must be weighed separately and marked at the carworks, under the supervision of the owner's inspection. The accuracy of the scales used must be certified to by a railroad-scale inspector appointed by the car owner.

These provisions to be incorporated in the contract covering the purchase of the equipment.

(c) Wooden and steel underframe cars (except refrigerator cars) should be reweighed and remarked each year during the first two years the cars are in service and thereafter once every two years. All-steel cars and all refrigerator cars should be reweighed and remarked at least once every three years. This weighing should be done at any favorable time during the year in which the car is due to be weighed, regardless of the month in which the previous weight was obtained. This paragraph does not apply to tank cars.

(d) When a car is materially changed by repairs, alterations or repainting, it should be

RULE 30 — *Continued.*

reweighed and remarked. (See paragraph (f) (8).)

(e) Any car without marking should be immediately reweighed and marked. Any car (except tank cars) which has not been reweighed and remarked within the prescribed period should be immediately reweighed and remarked. If the car (except tank cars) is reweighed at any time and is found to have a variation of 300 lb. or more (for refrigerator cars 500 lb. or more) between the marked and actual weight, it should be immediately remarked.

(f) (1) When empty cars are received in yards for inspection for defects or while empty cars are on shop tracks for repairs, there should be selected the cars whose condition and whose date of last weighing, etc., indicates that they should be reweighed and remarked. The number of cars selected will be regulated in accordance with facilities and traffic conditions.

(2) The initials and numbers of cars selected, also old light-weight marks, shall be reported to the weighmaster on the prescribed blank.

(3) Cars should then be cleaned and swept out under the supervision of the yardmaster or some one especially designated.

Cars should be dry and free from snow, ice,

RULE 30 — *Continued.*

false floors, removable stakes, posts, or anything else affecting the weight.

(4) Missing parts, such as side or end doors, or parts peculiar to certain types of cars, should be replaced and included in the marked weight.

(5) Temporary double decks in stock cars should be removed before cars are weighed.

(6) The old light-weight stencil marks should be entirely painted out with quick-drying paint.

(7) Before cars are weighed, the accuracy of the scale must be regularly certified by the scale department, scale must be properly balanced and free from interference, and the weighmaster must know that cars are clean.

(8) Cars should not be light-weighed during rain, snow, sleet or heavy winds; except that when cars have been materially changed by repairs, alterations or repainting they must be weighed, even if it is necessary to do so under unfavorable weather conditions.

(9) Cars should be light-weighed at rest, uncoupled and free at both ends.

(10) The weights of the cars so obtained should be furnished immediately on the prescribed blank to the car marker, who will mark the cars as provided in paragraph (a). When desired, any portion of the marks which will not be changed may be marked on the car before reweighing.

RULE 30 — *Continued.*

Complete reports of such reweighing and remarking should be forwarded on prescribed form to the designated transportation and mechanical officers and a copy retained by weighmaster.

(g) When a car is remarked the car owner should be notified of the old and the new weights, with place and date. The proper officer to whom these reports should be made will be designated in "The Official Railway Equipment Register."

(h) Whenever a weighmaster at a point not equipped for marking freight cars, as provided in paragraph (e), ascertains, as per paragraph (f), the light weight of a car which is not marked in accordance with this rule, he shall attach to the car the prescribed "Light Weight Card" with the light weight and send two copies of the card to the designated officer of the railroad on which the scale is located, one copy to be sent to the owner of the car. The presence of the Light Weight Card on the car shall be authority for remarking the car at first available station.

INTERPRETATION. Q.—In view of the A. R. A. standard lettering, is it permissible to omit the end lightweight stenciling from house and gondola cars?

A.— Yes, but the old light weight on end of car should be obliterated.

Q.— Is there not a conflict between paragraphs (d) and (e) in regard to billing for reweighing and stenciling of cars when cars are repaired?

RULE 30 — *Continued.*

A.— When a car is materially changed by repairs it should be reweighed and remarked, but bill should not be made against the owning road unless the variation between the old and new weight is 300 lb. or more, or the car has not been reweighed and marked within the prescribed period.

RULE 31. The re-light-weighing of cars, as provided above, to be charged to car owners, except when the weight of the car is changed on account of repairs due to unfair usage; when such repairs are made on authority of defect card, charge for re-light-weighing may be included on same authority.

PARTS OF CARS WHICH JUSTIFY REPAIRS IF OWNERS ARE RESPONSIBLE, OR REPAIRS OR CARDING IF DELIVERING COMPANY IS RESPONSIBLE.

RULE 32. Dome covers or safety valves missing from tank cars.

Material missing from cars due to handling on unloading machines.

Removing or cutting out parts of car to facilitate loading or unloading.

Known theft of parts of car occurring on handling line.

Damage to any car (including cars on ferries or floats) if caused by:

(a) Derailment.
(b) Cornering.
(c) Sideswiping.

Delivering Company responsible.

RULE 32 — *Continued.*

(d) Collision or impact other than that occurring in regular switching such as:

1. Misplaced switches.

2. Wrong or misinterpreted signals or failure to observe signals.

3. Letting cars get away on incline.

4. No rider protection when necessary.

5. Coupling on with locomotive at speed exceeding limits of safety.

(e) Handling of cars with broken or missing couplers, or couplers out of place.

(f) Colliding with or shoving over bumping post or other fixed obstruction.

(g) Shifting of loads from other cars.

(h) Overloading.

(i) Explosion.

(j) Collapsing buildings or other structures on right-of-way.

(k) Unconcealed fire damage.

(l) Flood.

(m) Storm where car is derailed or destroyed.

(n) Failure to close hopper or drop doors before moving car.

Defect cards shall not be required for any damage so slight that no repairs are required, nor for raked or cornered sheathing, roofing, fascia, or bent or cornered end sills, not necessitating the shopping of the car before reloading, the receiving line to be the judge.

RULE 32 — *Continued.*

INTERPRETATION. (1) Q.— In case of interior fire damage, in any class of car, if evidence of such interior damage was not discernible externally, is the damage at owner's risk?

A.— If there is no external evidence of interior damage, such interior damage is an owner's defect.

(2) Q.— When flooring planks are cut out and can be seen from the outside of car, who is responsible?

A.— They are cardable defects where they can be seen in interchange from underneath the car.

(3) Q.— Who is responsible for paint missing in spots, due to hot lading, such as pig iron, billets and blooms having been loaded in cars?

A.— It is not a cardable defect in interchange, unless the damage is such as to require shopping the car at the time.

(4) Q.— Does a car damaged by wreck, derailment, cornering, sideswiping or other unfair usage, as defined under this rule, carry the same responsibility to any other car in the same train or draft, or to cars to which the draft is being coupled, if said other car develops, at the same time, only minor defects?

A.— Yes.

(5) Q.— Should defects caused by a sudden stop due to emergency application of air brakes, or bursting of an air hose or breaking of a coupler knuckle be considered owner's responsibility?

A.—Yes; any damage occurring from such causes is owner's responsibility, except as otherwise provided in Rule 32.

(6) Q.—What is known theft of parts of car occurring on handling line intended to cover?

A.—Where the handling line knows beyond doubt that the items were stolen while car was in its possession, the car owner can not be held responsible, and missing material should be classed as a delivering line defect.

RULE 33. Owners will be responsible for the expense of repairs to safety appliances where not involved with other delivering line damage, except damage to running boards on tank cars when sideswiped or cornered.

In making repairs to safety appliance details, nails or lag screws must not be used where screws, bolts or rivets are required by law.

The use of drive screws is not permissible.

Handholds or grabirons must be of wrought iron or steel.

INTERPRETATION. Q.— Is it permissible to splice the running board of tank cars where owner claims his standard to be a one-piece board?

A.— Yes, provided it is spliced in accordance with the requirements of the Tank Car Specifications.

RULE 34. Freight cars not now equipped with United States Safety Appliances, or United States Safety Appliances, Standard, may be so equipped at car owner's expense and special notice sent immediately to the car owner.

RULE 35. Vacant.

Delivering Company responsible.

RULE 36. Temporary advertisements tacked, glued, pasted, varnished or secured to cars by screws, wire, or any other manner.

The size and character of cards which may be used on freight cars may be divided into five classes, viz.:

1. Routing Cards.—To be of cardboard; maximum size, vertical dimension, five inches; horizontal dimension, eight inches.

To be permitted on all loaded cars.

RULE 36 — *Continued.*

The text to be as follows: No picture or trade-mark to be permitted. Space for railroad information to occupy lower three-fifths of card. Any printing on the upper two-fifths to be limited to letters not exceeding one-half inch in any dimension. All printing to be in black ink. Any deviation from the above will be considered as an advertisement, and cards should be removed and charges made in accordance with Rule 107.

They may be affixed by shippers, not to exceed one card on each side of a car; must not be pasted or glued, but placed in rack or on specified location when such is provided for in local rules.

(See page 183 for copy of card in reduced form.)

2. Commodity Cards.—To be of cardboard; maximum size, vertical dimension, five inches; horizontal dimension, eight inches.

To be permitted only on cars loaded with perishable or fragile freight, and on tank cars containing dangerous articles, as per I. C. C. Regulations.

No picture or trade-mark to be permitted. All printing to be in black ink, and show only the name of commodity. Any deviation from the above will be considered as an advertisement, and cards should be removed and charges made in accordance with Rule 107.

They may be affixed by shippers, not to exceed one card on each side of a car; must not

RULE 36 — *Continued.*

be pasted or glued, but placed in rack or on specified location when such is provided for in local rules. Commodity cards required on tank cars may be pasted, glued or otherwise secured.

3. Special Placards.—These shall be such as are required by the "Interstate Commerce Commission Regulations for the Transportation of Explosives and other dangerous articles by freight and by express," and are to be of the size as therein described. They shall be used, be of the text and be attached to the cars as prescribed by said regulations.

Missing placards or certificates on cars containing explosives and other dangerous articles must be replaced. Placards and certificates on empty cars, except inflammable and commodity placards on tank cars, must be removed. Application or removal of such placards or certificates should be charged for on authority of defect card in accordance with Rule 107.

4. Symbol and A. R. A. Cards.— These are prescribed by individual roads for special purposes. Their size, use, text and method of application will be prescribed by each individual road to suit its requirements.

5. Special Cards Required by the Federal or State Governments.—Customs Regulation Card, printed on red cardboard, eight inches by ten and one-half inches in size, which specifies the penalty for the unlawful removal of the United States Customs Seals, and will be used as pre-

RULE 36 — *Continued.*

scribed by the United States Customs Regulations.

Other cards required by the laws of the United States, and within some of the States.

INTERPRETATION. Q.— Should a defect card be issued against a company for the removal of "inflammable" placards from *loaded* cars when offered in interchange when they are not loaded with inflammables?

A.— Yes.

Q.— Paragraph 3 states that inflammable placards and certificates on empty cars, except on empty tank cars, must be removed; may such cards be removed from empty cars, other than empty tank cars, and defect card issued against delivering line?

A.— Yes.

RULES 37-40, inclusive. Vacant.

RULE 41. When a car having damage for which delivering line is responsible is found with other defects which are ordinarily owner's responsibility and are not associated with delivering line defects, such fair usage defects may be repaired at car owner's expense.

RULE 42. Vacant.

RULE 43. Damage or loss to any car, except as provided for in Rules 32, 58, 65, 68, 84 and 99. Inside parts or concealed parts are at owner's risk. } Owners responsible

NOTE.— In the case of damage to more than five longitudinal sills on wooden underframe cars, more than four longitudinal sills on composite wooden and steel underframe cars, more than three steel longitudinal sills on steel or steel underframe cars and both steel center members on tank cars with two steel longitudinal sills only, the company on whose line such damage occurred must furnish owner statement show-

RULE 43 — *Continued.*

ing the circumstances under which the damage occurred, if it is claimed that the damage was the result of ordinary handling. This statement, in the case of cars reported under Rule 120, to accompany request for disposition of car, and in cases where it is not necessary to report car under Rule 120 to accompany the bill for repairs.

Q.— Is brake head worn by contact with wheel owner's or handling line responsibility?

A.— Brake head worn by contact with wheel is an owner's responsibility. Under the Safety Appliance Laws, cars are not allowed to run past inspection points with brake shoes missing. Therefore, it can not be assumed that these brake heads become worn due to neglect on the part of the handling line.

RULES 44-48, inclusive. Vacant.

Owners responsible.

RULE 49. Steel cars not equipped with cardboards for joint evidence and defect cards.

RULES 50-55, inclusive. Vacant.

RULE 56. Cars intended to be equipped with metal brake beams and so stenciled, if found with wooden brake beams.

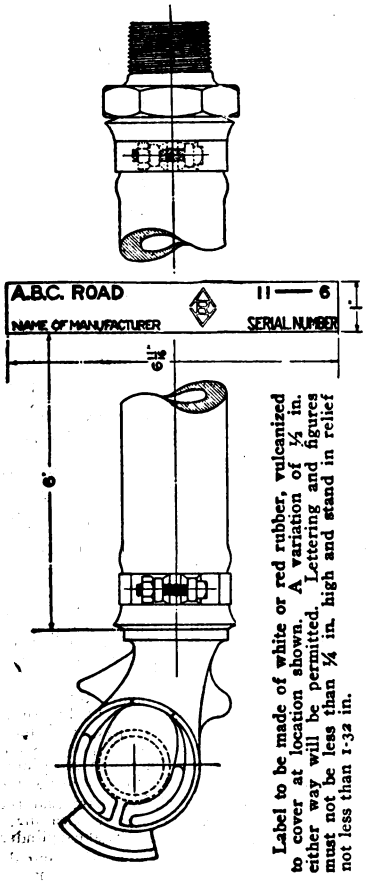
RULE 57. Cars not equipped with A. R. A. standard 1¾ in. air brake hose. For label see page 71.

Delivering Company responsible.

The use of a rectangular label in addition to the band label is optional with any railroad, provided space between the two labels is not less than two inches.

RULE 58. Cars offered in interchange with missing brake cylinders, reservoirs, triple valves, pressure-retaining valves, cut-out cocks, angle cocks or air hose, each or all complete.

RULE 59. Vacant.



Label to be made of white or red rubber, vulcanized to cover at location shown. A variation of ¼ in. either way will be permitted. Lettering and figures must not be less than ¼ in. high and stand in relief not less than 1-32 in.

Owners Responsible.

RULE 60. Cylinders and triple valves, not cleaned within the last twelve months, and the initial of road, together with date of last cleaning, oiling and testing, stenciled with white paint, preferably on the brake cylinder or auxiliary reservoir, or if same is not readily visible, in a convenient location at release rod.

Air brakes bearing cleaning markings nine months old or over may, when on repair or other tracks where the work can be done, be cleaned and repaired.

Triple valves cleaned must be removed from car and tested in accordance with A. R. A. code of tests for repaired triple valves.

All old stencil marks to be scraped off or painted over with a quick drying black paint. The place of cleaning, the initial of road, day, month and year to be stenciled on one side of auxiliary reservoir or brake cylinder, as shown on page 73, or if same is not readily visible, in a convenient location near the handle of release rod.

INTERPRETATION. Q.— In case either triple valve or brake cylinder is cleaned and repaired separately account of defective or dirty, less than nine months from date of last previous cleaning, or when over date, may owner be billed for the work?

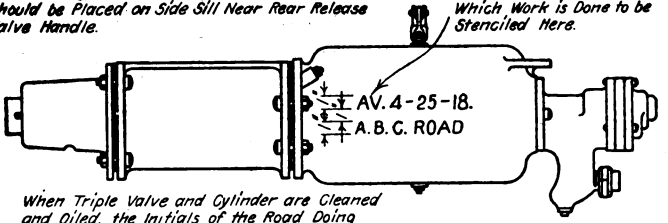
A.— If either alone is cleaned under these conditions, charge against owner is not proper and neither should the stenciling be changed. However, if either is found defective within nine months from date of last previous cleaning, both may be cleaned and owner charged in accordance with Item 29 of Rule 111 and the stenciling properly changed.

Q.— Is it necessary to clean dirt collector and retaining valves in order to justify average charge for cleaning, oiling, testing and repairing triple valve and brake cylinder?

A.— No. In such case the retaining valve and dirt collector should also be cleaned, for which additional charge is allowed.

If The Location of Lettering Does Not Present A Clear View From Outside of Car the Stenciling Should be Placed on Side Sill Near Rear Release Valve Handle.

Initials of Shop or Station at Which Work is Done to be Stenciled Here.



When Triple Valve and Cylinder are Cleaned and Oiled, the Initials of the Road Doing the Work to be Stenciled in 1" Letters in Location Shown.

RULE 61. Vacant.

RULE 62. In replacing air-brake hose on foreign cars, new 1913 A. R. A. standard specification hose must be used to justify bill.

In replacing brake shoes on foreign cars, new shoes must be used to justify bill.

RULES 63 and 64. Vacant.

Delivering Company responsible.

RULE 65. Missing journal bearings; journal bearings (regardless of previous condition), journal-box bolts and dust guards which require renewal, when delivering company is responsible for change in wheels and axles.

RULE 66. Periodical repacking of journal boxes, regardless of the responsibility of delivering company for change of wheels, journal boxes or journal bearings. To justify bill for the periodical repacking of journal boxes, the repacking must be done in accordance with A. R. A. Recommended Practice.

Owners responsible.

No charge shall be made for repacking unless all boxes are repacked.

No charge shall be made if the repacking is done within nine months from date stenciled on car.

If car bears no stenciling, showing date of previous repacking, all journal boxes may be repacked, if necessary, and charged for.

(a) All journal boxes shall be repacked with properly prepared packing (new or renovated) at least once every twelve months, at which time all packing will be removed from the boxes and the boxes cleaned; dust guards

RULE 66 — *Continued.*

to be renewed (if necessary) or replaced when wheels are changed.

(b) The date and place (railroad and station) where the work is done must be stenciled on the car body near the body bolster at diagonal corners in 1-in. figures and letters, using the same station initial that is used for air-brake stencil.

(c) This work to be done as far as possible when cars are on repair track undergoing heavy repairs. When on repair track for repairs, cars which have not had boxes repacked within nine months will have all boxes repacked and the record stenciled on the car as above.

(d) This does not contemplate any change in the intermediate packing of boxes when it is necessary to do so. No change should be made in the stenciling unless all boxes are repacked.

RULE 67. No part of body or truck frame or attachments shall be less than 2½ in. above top of rail.

WHEELS.

RULE 68. Flat sliding, cast-iron, cast-steel, wrought-steel or steel-tired wheels, if the spot is 2½ in. or over in length, or if there are two or more adjoining spots, each 2 in. or over in length. The same responsibility shall apply to mate wheel, regardless of length of slid spot.

A separate defect card should be furnished in the case of wrought-steel or steel-tired wheels.

Delivering Company responsible.

RULE 69. Vacant. October 1, 1918.

RULE 70. Cars intended to be equipped with wrought-steel or steel-tired wheels and so stenciled, if found with cast-iron or cast-steel wheels.

Cars intended to be equipped with cast-steel wheels and so stenciled, if found with cast-iron wheels.

Wrought-steel wheels may be substituted for cast-steel or steel-tired wheels.

INTERPRETATION. Q.— Can you apply a wrought-steel or cast-steel wheel in place of a cast-iron wheel and charge the owner for the betterment?

A.— No, except in case of wheels mounted on axles having journals 6 by 11 in. or above. In the case of delivering line defects in connection with such axles, a charge shall be made for difference between new cast-iron wheels and the value of the wrought-steel wheels.

RULE 71. Shelled out: wheels with defective treads on account of cracks or shelled-out spots 2½ in. or over, or so numerous as to endanger the safety of the wheel.

Brake burn: wheels having defective treads on account of cracks or shelling out due to heating.

RULE 72. Seams ½ in. long or over at a distance of ½ in. or less from the throat of the flange, or seams 3 or more in. long, if such seams are within the limits of 3¾ in., as shown in Fig. 5.

RULE 73. Worn through chill: when the worn spot is 2½ in. or over in length. Care must be taken to distinguish this defect from flat spots caused by sliding wheels.

RULE 74. Worn flanges — cast-iron or cast-steel wheels: wheels under cars of less than 80,000 lb. capacity, with flanges having flat vertical surfaces extending 1 in. or more from tread, or flanges 15-16 in. thick or less, gaged at a point ⅜ in. above tread. Wheels under cars of 80,000 lb. capacity or over, with flanges having flat vertical surfaces extending ⅞ in. or more from tread, or flanges 1 in. thick or less, gaged at a point ⅜ in. above tread. (See Figs. 3 and 4.)

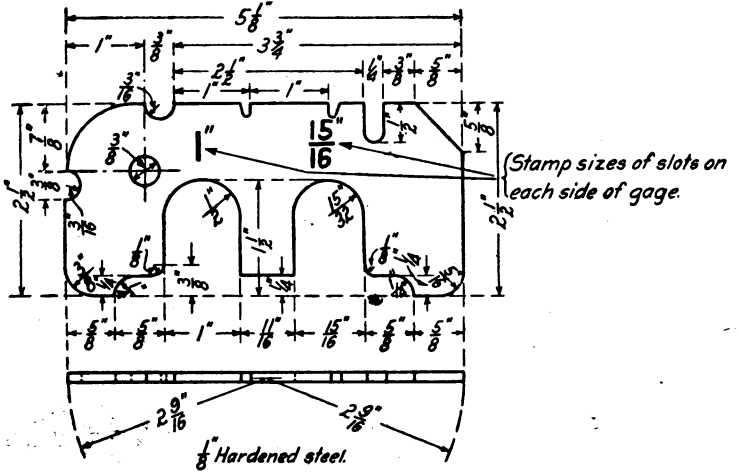
Worn flanges — wrought-steel or steel-tired wheels: flanges having flat vertical surfaces extending 1 in. or more from tread, or flanges 15-16 in. thick or less. (See Figs. 3 and 4.)

RULE 75. Thick flange: flange over 1 19-64 in. thick for cast-iron wheels having increased flange and tread standards of 1907 and 1909. (See Fig. 7.) } Owners responsible.

RULE 76. Tread worn hollow: if the tread is worn so that projection on under side of gage does not come in contact with tread of wheel (see Fig. 4-A), or rim liable to breakage.

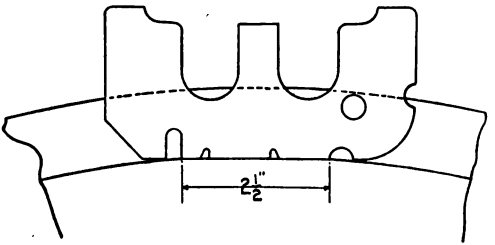
RULE 77. Burst: if the wheel is cracked from the wheel fit, outward, by pressure from the axle.

RULE 78. Cracked or broken flange, chipped flange if it exceeds 1½ in. in length and ½ in. in width; broken or chipped rim, if tread measured from the flange at a point ⅝ in. above tread is less than 3¾ in. in width (see Fig. 5); cracked tread, cracked plate, one or more cracked brackets, or broken in pieces (except as provided in Rule 32).



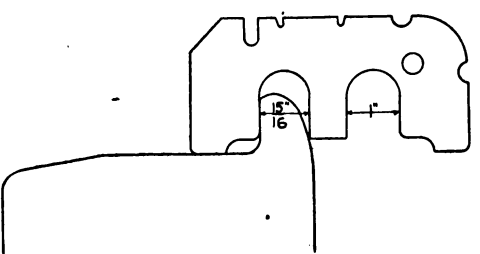
WHEEL DEFECT, WORN COUPLER LIMIT, WORN JOURNAL COLLAR AND JOURNAL FILLET GAGE.

FIG. 1.



METHOD OF GAUGING SHELLED AND FLAT SPOTS.

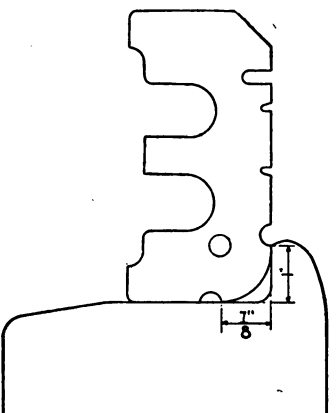
FIG. 2.
SEE RULES 68 AND 71.



METHOD OF GAUGING WORN FLANGES.

FIG. 3.
SEE RULE 74.

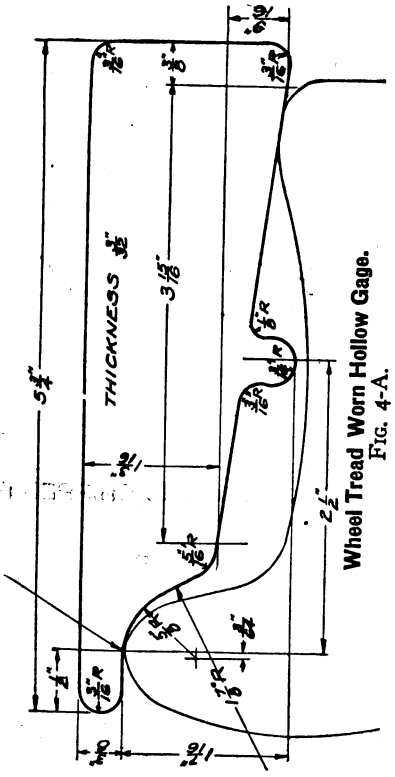
For cast-iron or cast-steel wheels under cars of less than 80,000 lb. capacity, and wrought-steel or steel-tired wheels with flanges 15-16 in. thick or less; cast-iron or cast-steel wheels under cars of 80,000 lb. capacity or over, with flanges 1 in. thick or less.



METHOD OF GAUGING WORN FLANGES.

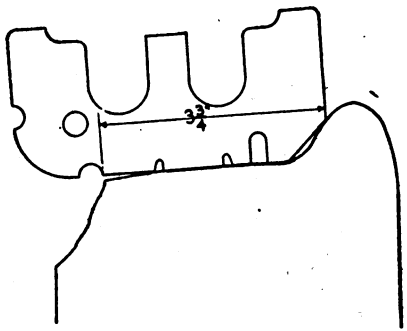
FIG. 4.
SEE RULE 74.

For cast-iron or cast-steel wheels under cars of less than 80,000 lb. capacity, and wrought-steel or steel-tired wheels 1 in. or more from tread; for cast-iron or cast-steel wheels under cars of 80,000 lb. capacity or over, ⅞ in. or more from tread.



Wheel Tread Worn Hollow Gage.

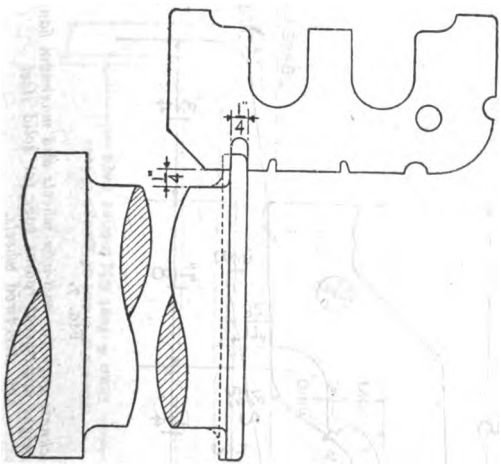
FIG. 4-A.



METHOD OF GAUGING CHIPPED RIMS.

FIG. 5.

SEE RULE 78.



METHOD OF GAUGING
WORN AXLE COLLAR.

Fig. 6.

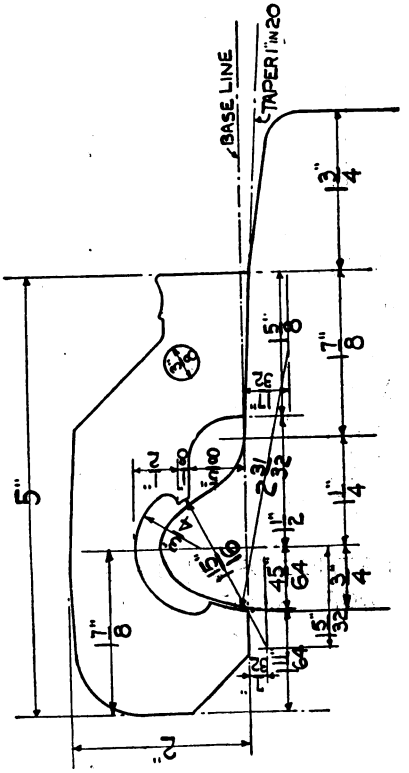


FIG. 7.

Maximum flange thickness gage for cast-iron wheels and maximum flange thickness, height and throat radius gage for solid steel and steel-tired wheels.

For all wheels cast after January 1, 1908.

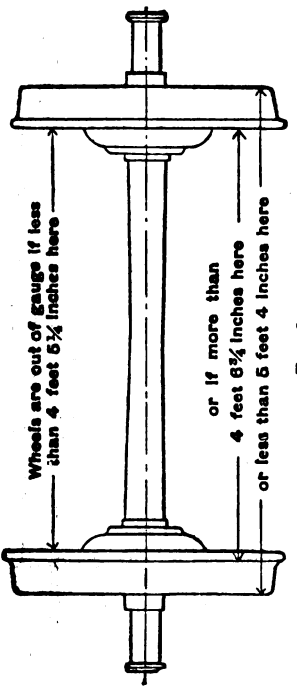


FIG. 8.

Measurements to be made at the same height on the wheels as the center of the axle.

For wheels cast prior to the M. C. B. Standard tread and flange adopted in 1907.

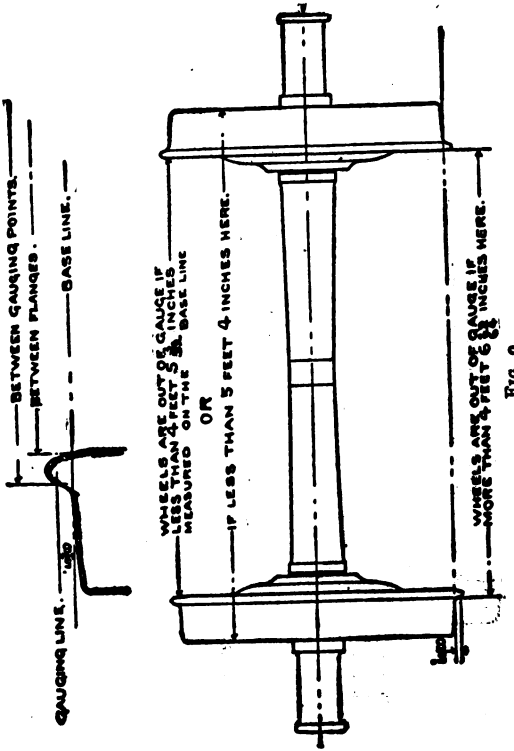


Fig. 9.

Measurements to be made at the same height on the wheels as the center of the axle.

For wheels cast after January 1, 1908.

RULE 79. Vacant.

RULE 80. Wrought-steel or steel-tired wheels loose; broken or cracked hubs, plates, bolts, retaining ring or tire.

RULE 81. Wheels loose or out of gage. (See Fig. 8 for wheels cast prior to the A. R. A. Standard tread and flange adopted by the former Master Car Builders' Association in 1907, and Fig. 9 for wheels cast after January 1, 1908.)

RULE 82. Vacant.

RULE 83. The determination of flat spots, worn flanges and chipped treads shall be made by a gage, as shown in Fig. 1, and its application to defective wheels, as shown in Figs. 2, 3, 4 and 5. The determination of thick flanges for all wheels cast after January 1, 1908, shall be made by a gage shown in Fig. 7.

AXLES.

RULE 84. Cut journals, axles bent, or axles damaged as provided in Rule 32.

RULE 85. Axles broken or having seamy journals; fillets at back end of journals less than 1/8 in. radius on axles of 40,000 lb. capacity, less than 5-16 in. radius on axles of 50,000 and 60,000 lb. capacity, and less than 3/8 in. radius on axles of greater capacity; length of journal increased 1/2 in. over standard length, or collar broken off or worn to 1/4 in. in thickness or less.

INTERPRETATION. Q.— Who is responsible for an axle cut by brake chain or brake rod?

A.— It is an owner's responsibility.

RULE 86.

FOR CARS WITH NON-A. R. A. STANDARD AXLES (FOUR AXLES PER CAR).

(a) Non-A. R. A. Standard axles less than the following prescribed limits must be removed from service:

Capacity, Lb.	Journal, In.	Wheel Seat, In.	Axle Center, In.
*100 000	5	6 7/16	5 5/8
70 000	4	5 5/8	4 7/8
60 000	3 3/4	5	4 3/8
50 000	3 1/2	4 3/4	4 1/8
40 000	3 1/4	4 5/8	3 7/8

NOTE.—Axles heretofore known as 70,000-lb. and 50,000-lb. capacity axles are not A. R. A. Standard axles.

*NOTE.—The use of the non-Standard 100,000-lb. capacity axle shown above, which has 5¼ in. by 9 in. journals, will be permitted for a limit load (total weight on rail) of 148,000 lb., provided, however, in the event of removal of wheels, it will be permissible to replace this axle with Standard A. R. A. 80,000-lb. capacity axle having 5 in. by 9 in. journals; in which case the car shall be restenciled to the limit load marking of 132,000 lb., or nominal capacity of 80,000 lb. The car owner will be responsible for the expense of this change, except that in case of delivering line defects the charge against owner shall be confined to the difference in value between the non-A. R. A. Standard axle removed and the A. R. A. Standard axle applied. In case of such change in axle and stenciling of car, owner shall be promptly notified.

FOR CARS WITH A. R. A. STANDARD AXLES (FOUR AXLES PER CAR).

The total weight of car and its lading must not exceed weight given in column "A." Column "B" is the nominal capacity stenciled on

RULE 86 — *Continued.*

all cars. Axles must be removed from service when less than the prescribed limits in columns "C," "D," "E," or when the condemning limits in columns "F" and "H" are reached. Owners responsible.

All cars to have their light weight and capacity in pounds stenciled on them, as per paragraph (h), Rule 3.

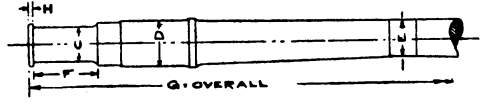
(b) A. R. A. Standard axles must be used in replacing A. R. A. Standard axles, subject to condemning limits for such axles.

A. R. A. Standard axles may be used to replace non-A. R. A. Standard axles of like capacity when over-all length conforms to A. R. A. Standard length, at expense of car owner, except that in case of delivering line defects the charge against owner shall be confined to the difference in value between the non-A. R. A. Standard axle removed and the A. R. A. Standard axle applied.

Non-A. R. A. Standard axles may be used to replace non-A. R. A. Standard axles in kind, until October 1, 1922, subject to condemning limits of such axles.

A. R. A. Standard 60,000 lb. capacity axle, with wheel seat less than the condemning limit for such axle, but above the condemning limit for non-A. R. A. Standard axle, may be replaced in kind, or may be used until October 1, 1921, to replace a non-A. R. A. Standard 60,000 lb. capacity axle when latter is of A. R. A. Standard length.

INTERCHANGE RULE No. 86.



A. R. A. STANDARD AXLES LIMITS OF WEAR AND DIMENSIONS, NEW.

A Total Weight on Rail	B Nominal Capacity.	Limits of Wear.					Dimensions, New.					
		C	D	E	F	H	C	D	E	F	G	H
Lb.	Lb.	In.	In.	In.	In.	In.	In.	In.	In.	In.	Ft. In.	In.
210 000	140 000	5½	7⅝	6 1/16	11½	¼	6	7⅝	6 1/16	11	7 6¾	⅞
161 000	100 000	5	6¾	5¾	10½	¼	5½	7	5⅞	10	7 4½	¾
132 000	80 000	4½	6¼	5¼	9½	¼	5	6½	5⅜	9	7 2½	¾
95 000	60 000	3¾	5½	4 11/16	8½	¼	4¼	5¾	4¾	8	7 0¼	⅝
68 000	40 000	3¼	4⅞	4 1/16	7½	¼	3¾	5⅛	4¼	7	6 11¼	⅝

RULE 86 — *Continued.*

(c) When secondhand axles are applied, the diameter of wheel seats and centers must not be less than limiting dimensions shown above, and the diameter of the journals must be at least 1/8 in. greater than the limiting dimensions shown above. The length of journals must not exceed 3/8 in. over standard length, the collar must not be less than 5/16 in. thick, and the fillet at back end of journals on axles of 40,000 lb. capacity cars must not be less than 1/8 in. radius, axles of 50,000 and 60,000 lb. capacity cars not less than 5/16 in. radius, nor less than 3/8 in. radius on axles of cars of greater capacity.

(d) When axle is removed on account of owner's defect on wheel, if diameter of journal is not at least 1/8 in. greater than limiting diameter shown, or if journal is more than 3/8 in. longer than standard length, or collar is less than 5/16 in. thick, the axle shall be considered as scrap, and so credited.

If owner elects, on account of improper repairs, to remove an A. R. A. Standard axle unsuitable to the car and apply a non-A. R. A. Standard axle, he shall charge the average credit price for non-A. R. A. Standard axle applied and give credit for the value of A. R. A. Standard axle removed as a secondhand or scrap axle, as covered in limits above, and at prices as provided in Rule 101.

(e) The truck as a whole shall be equal

RULE 86 — *Continued.*

in strength to the carrying capacity of the axles.

See paragraph (c), Rule 2.— Cars of 80,000 lb. capacity and over, equipped with A. R. A. Standard axles, may be loaded to maximum shown in Column "A," which is the total weight of car and lading for the respective capacities given.

INTERPRETATION. (1) Q.— If necessary, account of not having proper axle in stock, to apply A. R. A. Standard 60,000 lb. capacity axle with wheel seat below condemning limit of 5½ in., in place of good secondhand A. R. A. Standard 60,000 lb. capacity axle removed, should credit be allowed for difference, or should we assume that proper adjustment will be made in bill on defect card for wrong repairs?

A.— No charge or credit should be made by the repairing line for the axle applied or removed. The repairing line should attach to the car a defect card for the wrong axle, which will reimburse the car owner when the wrong repairs have been corrected.

(2) Q.— Is it proper to credit as scrap an axle having center diameter ¼ in. larger than A. R. A. Standard, all other dimensions being correct for A. R. A. Standard?

A.— No.

(3) Q.— This rule provides maximum loading for cars of 80,000 lb., 100,000 lb. and 140,000 lb. capacity, but no mention is made of cars stenciled 110,000 lb. capacity. Some roads are refusing to accept such cars if loaded beyond the nominal capacity stenciled thereon. What procedure should be followed?

A.— If the car is equipped with 5½ by 10 in. A. R. A. Standard axle and the car is stenciled 110,000 lb., it can be loaded up to 161,000 lb., the total weight of car and lading for that capacity axle.

RULE 86 — *Continued.*

(4) Q.— What is the proper charge for a 60,000 lb. capacity axle worked over from a condemned 80,000 lb. capacity axle?

A.— If the axle, as worked over, conforms to all maximum dimensions for a new 60,000 lb. capacity axle, and has never been used under a car of 60,000 lb. capacity, it may be charged as a new 60,000 lb. capacity axle.

IMPROPER REPAIRS.

RULE 87. Any company making improper repairs by using material which the repairing line should carry in stock, as prescribed in Rule 122, is solely responsible to the owners, with the exception of the cases provided for in Rules 56, 57 and 70. Such improper repairs must be corrected within nine months after first receipt of car on home line, to justify bill.

The company making such improper repairs must place upon the car, at the time and place the work is done, an A. R. A. defect card, which card must state the wrong repairs made.

RULE 88. In order that repairs of owners' defects may be expedited as fully as possible, foreign or private line cars may be repaired by the handling line by using material from their own stock instead of ordering material from car owner, as prescribed by Rule 122, in which event the repairing line must issue its defect card for the labor only of correcting such improper repairs, and defect card should be so marked.

In case of delivering line defects, defect

RULE 88—*Continued.*

card shall be issued for both labor and material for correcting the improper repairs.

INTERPRETATION. Q.— In the event of using wrong material from stock, instead of ordering correct material from car owner, are such repairs chargeable to owner?

A.— Yes, provided the original defects are owner's responsibility.

RULE 89. Vacant.

RULE 90. If an intermediate road finds it necessary to standardize wrong repairs, it may render bill against the car owner for the expense, except as provided in Rules 56, 57 and 70. A copy of the billing repair card of such intermediate line shall be final as to the fact that such wrong repairs existed and shall perform the same function as a joint evidence card.

INSTRUCTIONS FOR BILLING.

RULE 91. Bills may be rendered for work done under Rule 16, except in cases where owners are not responsible and the car bears no defect card covering the defects repaired, stating upon the bill the date and place where the repairs were made; the billing repair card or defect card to accompany the bill.

Billing repair cards returned for correction, or on account of exceptions, must not be defaced in any manner on the face of the card.

NOTE.—The following provisions must be observed when rendering or correcting bills:

(a) Bills should not be rendered for amounts less than 25 cents in aggregate, but

RULE 91 — *Continued.*

charges for items less than 25 cents may be held until they amount to that sum.

All bills should be rendered promptly. Bills rendered after one year from date of repairs may be declined. No bill should be rendered for repairs to cars after the time limit has expired, even though previous attempts have been made to ascertain proper ownership.

(b) No bills should be returned for correction on account of incorrect car numbers, but shall be passed for payment at once and the alleged errors in car numbers brought to the attention of the company rendering same, within 60 days from date bill is passed for payment.

The billing company shall furnish correct car reference, or shall issue within 30 days countercharge authority as per form shown on page 176.

(c) No bills shall be returned for correction on account of other error or questionable charges unless the net amount involved exceeds 10 per cent of the total amount of bill, but shall be passed for payment at once and the alleged error brought to the attention of the billing company within 60 days from date bill is passed for payment. The billing road must furnish proper explanation or shall issue within 30 days countercharge authority on form shown on page 176.

(d) Undercharges shall be similarly ad-

RULE 93 — *Continued.*

justed on regular authority of the company against which the bill has been rendered.

(e) When bills are returned for correction, all defect cards and billing repair cards, except those in question, must be retained by the company against which the bill has been rendered.

(2) Q.— What is meant by the clause "no bills shall be returned for correction on account of other error or questionable charges, unless the net amount involved exceeds ten per cent of the total amount of the bill"?

A.— The reference to other errors or questionable charges in Section (c) is intended to apply to any incorrect charges or errors other than incorrect car numbers. The incorrect car numbers are provided for in Section (b).

RULE 92. In rendering bills, cars shall be treated as belonging to companies or individuals whose name or initials they bear.

RULE 93. Separate bills shall be rendered for cars destroyed.

Separate bills shall be rendered for the periodical repacking of journal boxes.

All charges for repairs made to cars on account of owner's defects, defect cards and rebuttal authorities shall be consolidated against any one company into one bill, however, separate bill shall be rendered for the period subsequent to February 29, 1920, and prior to September 1, 1920.

Separate statements to be made:

First. For owner's defects for each calendar month.

RULE 91 — *Continued.*

Second. For all charges based on defect cards, including rebuttal charges.

NOTE.—Totals only of these statements to be shown on the recapitulation.

The title and address of officer to whom correspondence should be forwarded relative to exceptions to charges should appear on the bill.

RULE 94. For repairs made on authority of A. R. A. defect card, the defect card, together with a billing repair card, must accompany the bill, subject to requirement that repairs must be made within two years from date of first receipt of car on home line, except wrong repairs which must be corrected within nine months from date of first receipt of car on home line, to justify bill. In the case of repairs covered by defect card, if the owner changes the original standard of parts so involved, the charge must be no greater than if the original design had been followed.

No bill shall be rendered for repairs which have not been made, except as follows:

If the owner elects to dismantle the body or trucks, or both, charge may be made for such material as would have been required for the repairs covered by the defect card, but such charges to be confined to the actual material stated on card and items of labor for straightening or repairing material returned to store stock. No other labor shall be charged

RULE 94 — *Continued.*

in such cases except in so far as labor is already included in the A. R. A. prices for material.

RULE 95. Bills may be rendered against car owners for the labor only of replacing the following material when lost on the line of the company making the repairs: Couplers, including yokes, springs and followers, when lost with the couplers; friction draft gear complete, whether or not lost with the coupler.

INTERPRETATION. Q.— Should not the substitution of wooden block in place of complete friction draft gear be considered temporary or no repairs rather than wrong repairs?

A.— Should be considered no repairs and defect card issued for missing friction draft gear.

RULE 96. In making bills under these rules, the information necessary should be embodied on the form shown on page 182, whether the same is made as a bill or a statement to accompany a bill.

The columns in form referred to on page 182 may be arranged to accommodate any billing machine.

INTERPRETATION. Q.— This rule provides that "the information necessary should be embodied on the forms shown on page 182," etc. We have been called upon to furnish a description of all parts shown on the repair-card stub on the bill form, under the heading, "Description of parts repaired." Is it compulsory to make a description of all items that are applied and shown on repair stubs?

A.— The space referred to is intended for miscellaneous charges. It is not necessary to show detail description of the repairs covered by the billing repair cards.

RULE 97. Vacant.

RULE 98. Bills rendered for material and labor cast of wheels and axles shall be in accordance with the schedule of prices, with the proper debits and credits, as shown in Rules 101 and 107.

If new wheels and axles are substituted for secondhand wheels and secondhand or average credit price axles, proper charges and credits shall be allowed, although such substitution be made on account of only one loose or defective wheel or a defective axle, with the following exceptions; in case the owner of a car removes a damaged wheel or axle, no charge shall be made for any difference in value between the parts used and those removed that are not damaged.

All non-A. R. A. Standard axles shall be charged and credited at the average credit price shown in Rule 101 for such axles, except as follows: New non-A. R. A. Standard axles applied, of odd over-all length or odd journal dimensions, for which A. R. A. Standard axle can not be substituted, shall be charged at price, new, for such axle. The non-standard 100,000 lb. capacity axle which has 5¼ by 9 in. journals and the 70,000 lb. capacity axle, which has 4½ in. by 8 in. journals, the over-all length conforming to A. R. A. Standards for 80,000 lb. and 60,000 lb. axles, respectively, when removed from service and replaced with A. R. A. Standard axles, shall be credited at secondhand values for A. R. A. Standard 80,000 and

RULE 98 — *Continued.*

60,000 lb. axles, respectively, provided such axles can be turned to the required dimensions for the axles mentioned.

Items 201, 202 and 203 in Rule 101 shall cover new and average credit prices for non-A. R. A. Standard axle.

WROUGHT STEEL WHEELS.

The price for new wrought steel wheels shall be based on the scrap value of $5.55 for metal inside the condemning limit (which is ¼ in. above the limit groove) plus $2.21 for each ⅛ in. of service metal (on radius of tread) in connection with standard full flange contour, also base of limit groove not less than 29½ in. diameter. In no case shall a charge or credit for service metal be made in excess of 1½ in.

In Case of Owner's Defects: No credit will be allowed owner for loss of service metal due to turning off wheels. Should there be a further loss of service metal, however, due to the application of other wheels, the proper credit for such additional loss must be given the owner Any increase in the amount of service metal, due to the application of other wheels, may be charged to the owner.

In Case of Delivering Line Defects: When repairs are not covered by a defect card, the proper credit for any loss of service metal must be given the owner at the rate of $2.21 for each

RULE 98 — *Continued.*

$\frac{1}{16}$ in. of service metal removed, measured on radius of tread, in connection with full standard tread and contour, and charge shall be made against owner for any increase in the amount of service metal due to application of other wheel.

When the repairs are covered by the defect card of another company, charge covering such repairs shall be made against the owner of the car, the defect card and the billing repair card to be attached to the bill. The owner to render counter-bill on the authority of the defect card against the company issuing same, including an additional charge to cover the loss of service metal on account of the defects covered by the card. Should there be an additional loss of service metal, on account of the application of other wheels, the company making the repairs shall allow the proper credit to the owner to cover such additional loss of metal. Should there be an increase in the amount of service metal, due to the application of other wheel, such increase may be charged to the owner.

The above provisions shall govern any loss or increase of service metal on account of the mate wheel, even if same is not defective, when both wheels are turned off to correspond.

The necessary information must be given in all cases, as provided in Rules 9 and 10.

RULE 98 — *Continued.*

In cases of slid-flat wheels, ⅛ in. for loss of service metal will be allowed for flat spots 2½ in. long, and ⅛ in. for each additional inch or fraction thereof.

Any additional loss of service metal that it is necessary to remove on account of worn flange or tread must be borne by car owner.

INTERPRETATION. Q.— What is the proper method for determining the amount of service metal on wrought steel or steel tired wheels before and after turning?

A.—The gage shown on Sheet C-1, A. R. A. book of standard drawings, should be used in order to determine amount of service metal in connection with standard full flange contour. Base of limit groove on 33-in. wrought steel wheels must not be less than 29½ in. in diameter.

RULE 99. In no case shall car owner be charged for the second or subsequent applications of journal bearings if applied within 30 days from initial application at same journal location on same road, same trip, except when renewed within such period account change of wheels or axle at same journal location, in case the application of wheels is chargeable to owner.

RULE 100. Bills or statements which do not embody all the information called for by the headings of the columns may be declined until made to conform to the requirements of the rule.

RULE 101. Bills for repairs made under these rules and for material furnished shall be in conformity with schedule of prices and credits for the articles enumerated below:

No.	ARTICLE	8 In.	10 In.
	AIR-BRAKE EQUIPMENT:		
1	Air-brake hose, 1¼ in. A. R. A. standard, complete with fittings, applied to car, charge	$3.20	$3.20
2	Air-brake hose, A. R. A. standard, average credit for fittings for same	.90	.90
4	Angle cock, plain handle, 1¼ in., complete, applied to car	2.25	2.25
5	Angle cock, plain handle, average credit	1.30	1.30
6	Angle cock, self-locking handle, 1¼ in., complete, applied to car	2.71	2.71
7	Angle cock, self-locking handle, average credit	1.62	1.62
8	Auxiliary reservoir, detachable type	4.12	9.42
9	Auxiliary reservoir, combined type	4.15	9.42
10	Auxiliary reservoir, stud and nut	.08	.08
11	Brake-pipe air strainer, 1¼ in	.90	.90
12	Brake-pipe air strainer union nut	.18	.18
13	Brake-pipe air strainer union nut swivel	.18	.18
14	Centrifugal dirt collector, 1 in	1.80	1.80
15	Centrifugal dirt collector, 1¼ in	2.25	2.25
16	Centrifugal dirt collector, 1¼ in. deflector and plug	.46	.46
17	Cut-out cock, complete, applied to car, charge	1.95	1.95
18	Cut-out cock, average credit	1.37	1.37
19	Cylinder body	3.01	5.27
20	Cylinder piston and rod	1.51	2.25
21	Cylinder piston follower	.12	.39
22	Cylinder piston packing leather	.90	1.51
23	Cylinder piston packing leather expander	.08	.09
24	Cylinder piston packing expander, J. M. type	1.21	1.44
25	Cylinder piston release spring	.75	.75
26	Cylinder non-pressure head	.90	1.89
27	Cylinder pressure head, plain	.75	1.14
28	Cylinder pressure head, with lever brackets, lugs, bolts and nuts	2.25	2.64
29	Cylinder pressure head detachable brackets, complete	1.51	1.51
30	Cylinder pressure head detachable bracket only, each	0.46	$0.46
31	Cylinder pressure head bracket bolts and nuts	.30	.30

RULE 101 — *Continued.*

No.	ARTICLE	8 In.	10 In.
32	Cylinder gasket	$ .09	.12
33	Cylinder head bolt and nut	.04	.04
34	Cylinder reservoir bolt and nut	.04	.04
35	Gasket, air hose coupling, applied	.06	.06
36	Gasket, leather, union, all sizes	.04	.04
37	Pipe nipple on end of train line, threaded, 12 in. or less in length, applied net includes material cost of nipple, on disconnection and connection only	.40	.40
38	Pressure retaining valve, two position, weight type, applied to car, charge	1.51	1.51
39	Pressure retaining valve, two position, weight type, average credit	.89	.89
40	Pressure retaining valve, three position, weight type, applied to car, charge	4.52	4.52
41	Pressure retaining valve, three position, weight type, average credit	3.05	3.05
42	Pressure retaining valve, single spring type, applied to car, charge	2.25	2.25
43	Pressure retaining valve, single spring type, average credit	1.41	1.41
44	Pressure retaining valve, double spring type, applied to car, charge	4.52	4.52
45	Pressure retaining valve, double spring type, average credit	3.05	3.05
46	Release valve, applied to car, charge	.90	.90
47	Release valve, average credit	.55	.55
48	Release valve rod, with or without cotter key and staple, applied, net	.20	.20
49	Train pipe air strainer (1¼ in.)	.90	.90
50	Triple union nut	.15	.15
51	Triple union swivel	.15	.15
52	Triple valve body, complete, old style, W. A. B	8.28	8.28
53	Triple valve body, complete, old style, N. Y.	9.03	9.03
54	Triple valve body, K type	12.04	12.04
55	Triple valve gasket	.30	.30
56	Triple valve, complete, H type	21.70	21.70
57	Triple valve, complete, K type	31.00	31.00

NOTE.—Other air-brake material to be charged at catalogue prices.

RULE 101 — *Continued.*

CHARGES FOR PIPE FITTINGS.
(No Credit for Scrap.)

No.	SIZE	⅜ In.	½ In.	¾ In.	1 In.	1¼ In.
58	Bushings	$0.03	$0.03	$0.03	$0.04	$0.04
59	Couplings	.04	.04	.07	.09	.11
60	Elbows	.04	.07	.09	.13	.16
61	Nipples, 12 in. or less in length	.07	.08	.08	.11	.15
62	Reducing or street elbows	.04	.07	.09	.13	.16
63	Union, lip type	.10	.11	.15	.18	.25
64	Union, ground joint type	.16	.20	.24	.31	.48
65	Union tee	.26	.32	.39	.52	.78

No.	MATERIAL	Charge	Credit
100	Altering height of one end of car by adjusting center plates, net (this also applies to renewing full length shims)	$4.50	.....
101	Altering height of one end of car, shimming springs, net (this includes renewing of shims)	2.85	.....
102	Altering height of car with metal shims between journal boxes and arch bars; labor charges to be based on regular allowance for box bolts. Material to be charged at actual weight, and proper credit allowed for material removed	.....	.....
103	Bolts, nuts and forgings, finished, per lb	0.075	$0.01
104	Box lids, pressed steel, including bolt, cotter, washer and spring, all sizes, each, net	.47	.....
105	Box lids, malleable iron (manufactured), including bolt and spring, if any, all sizes, each, net	1.20	.....
106	Brake shoe, applied; no credit for scrap	.56	.....
107	Brake shoe, reinforced back, applied; no credit for scrap	.71	.....
108	Brake-shoe key, applied; no credit for scrap	.08	.....
109	Cardboard (for defect or destination card), complete, applied, each	0.40	.....
110	Cardboard for inflammable placards, complete, including metal reinforcement strips, if any, and brackets secured to car, made and applied to car with bolts or rivets	1.50	.....
111	Castings, rough iron, per lb	0.04	$0.01

RULE 101 — *Continued.*

No.	MATERIAL	Charge	Credit
112	Castings, rough, malleable, per lb	$ .12	.01
113	Castings, rough steel, weighing 100 lb. and less, per lb	.15	.01
114	Castings, rough steel, weighing over 100 lb. each, including bolsters, side frames, etc., per lb	.11	.01
115	Chain, per lb	.09	.01
116	Coupler, complete, new A. R. A., type "D," 5 by 7 in. shank	34.60	.....
117	Coupler body, new, A. R. A., type "D," 5 by 7 in. shank	21.65	3.80
118	Coupler, complete, new, A. R. A., type "D," 6 by 8 in. shank	35.10	.....
119	Coupler body, new, A. R. A., type "D," 6 by 8 in. shank	22.15	4.00
120	Coupler knuckle, new, A. R. A., type "D"	7.90	1.40
121	Coupler knuckle lock, new, A. R. A., type "D"	2.85	.20
122	Coupler lock lifter, new, A. R. A., type "D"	.57	.03
123	Coupler knuckle thrower, new, A. R. A., type "D"	1.00	.05
124	Coupler knuckle pin, new, A. R. A., type "D"	.75	.10
125	Coupler, A. R. A., complete, new, steel, 5 by 5 in. shank	26.55	.....
126	Coupler, A. R. A., temporary standard, complete, new, steel, 5 by 5 in. shank	29.75	.....
127	Coupler, A.R.A., complete, new, steel, 5 by 7 in. shank	27.35	.....
128	Coupler, A. R. A., temporary standard, complete, new, steel, 5 by 7 in. shank	31.75	.....
129	Coupler body, A. R. A., one, new, steel, 5 by 5 in. shank	18.20	2.75
130	Coupler body, A. R. A., temporary standard, one, new, steel, 5 by 5 in. shank	21.40	3.20
131	Coupler body, one, malleable, 5 by 5 in. shank	.....	2.75
132	Coupler body, A. R. A., one, new, steel, 5 by 7 in. shank	19.00	3.10
133	Coupler body, A. R. A., temporary standard, one, new, steel, 5 by 7 in. shank	23.40	3.45
134	Coupler body, one, malleable, 5 by 7 in. shank	.....	3.10
135	Coupler knuckle, one, new, open	.....	.65
136	Coupler knuckle, one, new, solid, applied	5.65	.85
137	Other individual malleable wrought or steel parts, per lb	.15	.01
138	Coupler knuckle, pin, one, new, applied	0.60	.10
139	Coupler lock, one, new, applied	2.10	.15

RULE 101 — *Continued.*

No.	MATERIAL.	Charge	Credit
140	Coupler release clevis, applied, net	$ .12	.....
141	Coupler release clevis link, applied, net	.12	.....
142	Coupler release clevis pin or bolt, applied separately, net	.08	.....
143	Door hook, refrigerator car, one, applied, net	.10	.....
144	Door hook, staple or eye, one, applied, net	.07	.....
145	Door, for end of box or stock car, wooden, each, applied; no credit for scrap	4.26	.....
146	Door, for end of box or stock car, ventilated (wooden frame with iron rods), each, applied; no credit for scrap	5.33	.....
147	Door, for side of box or stock car, wooden, each, applied; no credit for scrap (does not apply to reinforced types)	14.93	.....
148	Door, for side of box car (reinforced type with two or more longitudinal shaped metal stiffeners and one vertical metal spark strip), each, applied, no credit for scrap	25.00	.....
149	Door for side of box car, ventilated (wooden frame with iron rod), each, applied; no credit for scrap	17.60	.....
151	Door, wooden, single, for side of carriage, automobile or furniture car, when doorway is over 6 ft. wide, each, applied; no credit for scrap	16.00	.....
152	Door, for side of stock car, with iron rods, each, applied; no credit for scrap	17.06	.....
153	Door, for roof of coke car, wooden, each, applied; no credit for scrap	3.20	.....
154	Door, for roof of stock car, wooden, each, applied; no credit for scrap	3.20	.....
155	Half door, for side of stock car, each, applied; no credit for scrap	7.50	.....
156	Half door, or twin door, for side of carriage, furniture or automobile car, wooden, each, applied; no credit for scrap	16.00	.....
157	Half door, for end of furniture, carriage for automobile car, each, applied; no credit for scrap	16.50	.....
158	Handhold, R. & R. or R., charge on a bolt rivet, or nut basis and add material cost.		
159	Hatch cover, for roof of refrigerator car, wooden, each, applied; no credit for scrap.	2.66	.....
160	Hatch plug, for refrigerator car, wooden, each, applied; no credit for scrap	4.26	.....
161	Iron, galvanized, per lb	.07	.....
162	Journal bearings, brass or bronze, lined or unlined, per lb., applied	.24	.17

RULE 101 — *Continued.*

No.	MATERIAL	Charge	Credit
163	Journal bearings, filled brass or bronze shell, per lb., applied	$ 0.20	.17
	Journal Bearings: Weight to be charged and credited as follows:	lb.	lb.
164	For journals 7 in. long and over, but not 8 in.	10	6
165	For journals 8 in. long and over, but not 9 in.	13	8
166	For journals 9 in. long and over, but not 10 in.	20	12
167	For journals 10 in. long and over, but not 11 in.	25	15
168	For journals 11 in. long and over	37	23
169	Journal bearings, cast steel or malleable iron back, credit for scrap, per lb.	.....	$ 0.02
	JOURNAL BOXES, PERIODICAL REPACKING OF, PER CAR, NET:		
169a	For journals 7 in. long and over, but not 8 in.	2.28	.....
169b	For journals 8 in. long and over, but not 9 in.	2.73	.....
169c	For journals 9 in. long and over, but not 10 in.	3.06	.....
169d	For journals 10 in. long and over, but not 11 in.	3.25	.....
169e	For journals 11 in. long and over,	3.64	.....
170	Key ring, one, applied, net	.07	.....
171	Lag screws, each, no credit for scrap	.03	.....
172	Labor, per hr	1.20	.....
173	Lumber—Yellow and Norway pine, oak, hickory, elm and fir, dressed and framed, per ft. B. M. required to make the part	.11	.....
174	Nails, per lb	.06	.....
175	Nut locks, or lock nut, all sizes, no credit for scraps, each $0.02	.04	.....
176	Paint, lead, freight car, mixed, per lb.	.26	.....
177	Paint, mineral, freight car, mixed, per lb.	.20	.....
178	Pipe, black or galvanized, ⅜ in., per ft.	.06	.0025
179	Pipe, black or galvanized, 1 in., per ft.	.10	.005
180	Pipe, black or galvanized, 1¼ in., per ft.	.15	.01
181	Ratchet wheel key, one, applied, net	.07	.....
182	Screws, wood, any size, per 100	.60	.....
183	Spring cotters or split keys, each, renewed, when not used with application of other parts being renewed, net	.05	.....
184	Spring cotter or split key, one, renewed, when used in connection with other parts being repaired or renewed, net	.01	.....
185	Staple, one, applied, net	.01	.....
186	Steel, elliptical springs, per lb.	.08	.01
187	Steel, helical springs, per lb.	.07	.01
188	Steel, pressed and flanged, per lb.	.10	.01

RULE 101 — *Continued.*

No.	MATERIAL.	Charge	Credit
188a	Steel, pressed or flanged involving fabrication rivets, such as riveted steel cross tie braces, per lb.	$ 105	$0 01
	NOTE.—The above price also to be charged for plate and structural steel parts riveted together.		
188b	Steel, pressed or flanged, to which are secured malleable, wrought or cast steel parts, such as body and truck bolsters, per lb. (composite price, complete)	.115	0.01
189	Steel, plate and structural, per lb	0.05	0.01
190	Stenciling sides and ends when done to preserve identity of car, when not necessitated by other repairs, including panel back ground when necessary, net (per Rule 102)	1.85	.....
191	Turnbuckles, all sizes, each, net	.88	.....
	WHEELS		
	NOTE.—Bills rendered for material cost of wheels and axles shall be in accordance with the following schedule of prices, plus the labor charge shown in Rule 107.		

No.		New	Second Hand	Scrap Credit Price
192	One 33-in. cast iron wheel	$17.15	$9.45	$5.85
193	One 33-in. cast steel wheel	51.65	28.40	5.85
194	One 33-in. wrought or rolled steel wheel	58.55	.....	5.55
194-A	The price of new wrought steel wheels shall be based on the scrap value of $5.55 for metal inside the condemning limit (which is ¼ in. above the limit groove) plus $2.21 for each ⅛ in. of service metal (on radius of thread) in connection with standard full flange contour, also base of limit groove not less than 29½ in. in diameter. In no case shall a charge or credit for service metal be made in excess of 1½ in.			
194-B	The foregoing scrap prices in Items 192, 193 and 194 will also be allowed for wheels removed from dismantled cars.			

RULE 101 — *Continued.*

AXLES.

No.	MATERIAL	New	Second Hand	Scrap
195	One A. R. A. standard axle, 140,000 lb.	$49.00	$29.40	$16.35
196	One A. R. A. standard axle, 100,000 lb.	42.35	25.40	14.00
197	One A. R. A. standard axle, 80,000 lb.	35.00	21.00	11.60
198	One A. R. A. standard axle, 60,000 lb.	25.00	15.00	8.25
199	One A. R. A. standard axle, 46,000 lb.	21.30	12.80	7.00

No.	MATERIAL	New	Average Credit Price
201	One non-A. R. A. axle, 70,000 lb.....	$30.00	$10.00
202	One non-A. R. A. axle, 60,000 lb.....	25.00	8.25
203	One non-A. R. A. axle, 50,000 lb. or under.....	21.90	7.00
	Cars built prior to October 1, 1915, will not be accepted in Interchange after October 1, 1922, unless equipped with A. R. A. Standard axles.		
	For non-A. R. A. Standard axles of capacity other than those shown in Rule 101, Items 201, 202 and 203, use the new and scrap prices shown for A. R. A. Standard axle of same capacity: if same capacity is not shown, use new and scrap prices shown for A. R. A. Standard axle of next lower capacity.		
	The foregoing scrap prices in Items 195 to 199, inclusive, and average credit prices in Items 201 to 203, inclusive, will also be allowed for axles removed from dismantled cars.		

BRAKE BEAMS.

Item No.	MATERIAL	Charge New	Charge S. H.	Avg. Cr. (Defective or Missing)
209	One A. R. A. No. 1 trussed or solid type, complete, with or without safety chain clips or finger guards (per Figures 1 and 2).....	$7.00	$5.25	$2.40
210	One A. R. A. No. 2 trussed type, complete, with or without chain clips or finger guards (per Figure 1).....	7.25	5.45	2.50

RULE 101 — *Continued.*

BRAKE BEAMS.

Item No.	MATERIAL (Brake Beams)	Charge New	Charge S. H.	Av. Cr. (Defective or Missing)
211	One A. R. A. No. 3 trussed type, complete, with or without safety chain clips or finger guards (per Figure 1).....	$7.85	$5.90	$2.70
212	One non-A. R. A. trussed or solid type, complete, with or without safety chain clips or finger guards (per Figure 1).....	2.02	2.02	.70
213	One non-A. R. A. wooden, wooden-trussed or composite beam or parts of same shall be charged at A. R. A. prices for lumber, forgings, castings, etc.....	.....	.....	.....
214	One non-A. R. A. wooden, wooden-trussed or composite beam removed when A. R. A. metal brake beam is applied.....	.....	.....	.39
215	One finger guard pin, finger guard casting or safety chain clip, applied separately, each, net....	.13	.13	.....

INTERPRETATION. (1) Q.— What is the correct price per pound for the steel friction rods applied to cars equipped with the Cardwell draft gear?

A.— A. R. A. price for forgings.

(2) Q.— Is a dust guard, made in our own shops of wood and canvas, to be considered as a manufactured article?

A.— It should not be considered as a manufactured article under Rule 105, but may be charged at cost.

(3) Q.— Is the revised credit price of 90 cents for A. R. A. Standard air-brake hose fittings intended to apply to fittings complete, regardless of condition of same?

A.— Yes. It is the average credit price, regardless of condition of fittings removed or missing. The same principle applies to defective or missing angle cocks, cut-out cock, pressure retaining valves and release valves, or parts of same.

RULE 101 — *Continued.*

(4) Q.— Referring to Interpretation No. 3, should the average credit be allowed for air-brake hose fittings in the case of a defect card covering hose missing complete?

A.— No credit should be allowed in such case.

(5) Q.— What scrap credit should be allowed for couplers removed from dismantled cars?

A.— In settling for the salvage of dismantled cars a scrap credit of one cent per lb. should be allowed for couplers.

(6) Q.— If a defective air-brake cylinder packing leather is removed, what material charge should be made for a good secondhand leather or a retreated leather applied which passes the A. R. A. standard test after being in position on the car?

A.— No charge is to be made for a retreated secondhand cylinder packing leather.

(7) Q.— If followers are removed from cars by foreign lines for being short but really on account of draft timber bolt holes enlarging and the larger followers put in place to save removing the draft timbers, should or should not the owner of the car be charged for same, and if they are charged for same should not the followers removed for being short be credited at full price?

A.— Where draft timbers are not worn to the extent of requiring renewal, charge against owner for followers applied is proper, and short followers removed may be arbitrarily credited as scrap.

(8) Q.—In the event the labor and material used in repairing a door exceed the cost of a new door complete, should the charge be confined to the cost of the new door?

A.— Yes. The charge should be confined to the cost of the new door complete.

(9) Q.—Should the weight for standard springs and spring caps given on Sheet A. R. A. 31 of the A. R. A. Standards or the actual scale weights be used in rendering bills for springs?

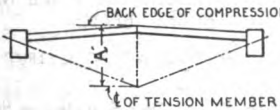
A.— Charges should be on the basis of weights given on Sheet A. R. A. 31.

Rule 101—*Cont'd.* BRAKE BEAMS.

The following illustrations (Figures 1 and 2) are to be used for identifying all M. C. B. No. 1, 2 and 3 brake beams. All beams which do not conform to these illustrations shall be charged and credited as non-A. R. A. brake beams:

IDENTIFICATION TABLE FOR A.R.A. TRUSSED TYPE BRAKE BEAMS

ANY BEAM WITH A SINGLE DIMENSION OR REQUIREMENT LESS THAN THAT SHOWN SHALL BE CLASSED EITHER NON A.R.A. OR ONE CLASS LOWER AS CASE MAY BE.



COMPILED BY A.R.A. BRAKE BEAM COMMITTEE 1920.

MINIMUM REQUIREMENT ONLY

COMPRESSION MEMBER

FORM	DIMENSION	CLASS-A.R.A.-No. 1 6500#	2 12000#	2+ 15000#	3 18000#
	a	2 1/8"	2 3/8"	2 3/8"	2 3/8"
	b	2 1/16"	2 3/16"	2 3/16"	2 3/16"
	t	1/4"	5/16"	3/8"	3/8"
	a	2 1/16"	2 1/2"	2 1/2"	
	b	2 3/8"	2 7/8"	2 7/8"	
	t	5/32"	3/16"	3/16"	
	a	2 1/4"	2 3/4"	2 3/4"	3 1/2"
	b	2 1/4"	2 3/4"	2 3/4"	3 1/2"
	t	1/4"	3/8"	3/8"	1/2"
	a		1 7/8"	1 7/8"	1 7/8"
	b		3"	3"	3"
	t		3/8"	3/8 OR 1/2	1/2"
	t'		5/16"	5/16 OR 3/8	3/8"
	a	2 5/8	3 2 5/8	3	3 2 5/8 3
	b	2" OR 1 1/2"	2" OR 1 1/2"	1 1/2	2 1/2 OR 1 1/8
	t	3/16 7/32	3/16 7/32	1/4	3/16 1/4
	a	2"	2 1/2"		
	b	1 1/2"	1 1/2"		
	t	7/32"	7/32"		

TENSION MEMBER

FORM	CLASS-A.R.A.-No. 1 6500#	2 12000#	2+ 15000#	3 18000#
	1"	1 1/8"	1 1/4"	1 3/8"
		1 1/8"	1 1/8 OR 1 1/4"	1 1/4"
SOLID TRUSS TYPE BEAMS				
	7/16 X 2" OR 3/8 X 3"	1/2" X 2 1/2" OR 1/2" X 2 1/2"	5/8 X 2"	5/8" X 2"
OR EQUIVALENT AREA				
	a 1 3/4" b 1 3/4" t 1/4"	a 2" b 2" t 5/16"	a 2" b 2" t 5/16"	a 2 1/2" b 2 1/2" t 3/8"

DISTANCE FROM BACK OF COMPRESSION TO CENTER OF TENSION MEMBER OR 'A'

DEPTH TRUSS	1	2	2+	3
'A' NOT LESS THAN	12"	13 1/2"*	14"	15"

‡ WHEN 'A' IS GREATER THAN 14 1/2"

* ON BEAMS WITH TEE-SECTION TENSION MEMBER 'A' IS MEASURED OVER OUTSIDE OF COMPRESSION AND TENSION MEMBERS AS FOLLOWS:-

DEPTH TRUSS	1	2	2+	3
'A' NOT LESS THAN	12"	12 1/2"	16 1/2"‡	17"

FIG. 1.

RULE 101 — *Continued.*

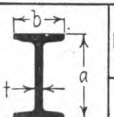
IDENTIFICATION TABLE FOR M. C. B. NO. 1 SOLID BRAKE BEAMS

SOLID BEAMS ARE THOSE WITHOUT A STRUT MEMBER

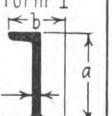
No Solid Beam May Be Classed as No. 2 or Higher.
Any Solid Beam with a Single Dimension or Requirement Less Than That Shown is Non M. C. B.

Compiled By M.C.B. Brake Beam Committee 1917.

Minimum Requirement Only



Form I



Form II

Form	Dimensions			Wt. Per Foot Without Attachments lbs.
	a	b	t	
I	5"	$3\frac{1}{4}$"	$\frac{1}{2}$"	14.75
	5"	$3\frac{1}{4}$"	$\frac{3}{8}$"	17.00
	6"	$3\frac{5}{16}$"	$\frac{1}{4}$"	12.25
	6"	$3\frac{7}{16}$"	$\frac{3}{8}$"	14.75
	6"	$3\frac{9}{16}$"	$\frac{1}{2}$"	17.25
II	$6\frac{1}{2}$"	4"	$\frac{1}{4}$"	15.25

FIG. 2.

RULE 102. Not more than one pound of mineral paint can be charged for 15 sq. ft. of surface covered, and not more than one pound of lead paint for 12 sq. ft. of surface covered. No charge to be made for lettering except when done to preserve the identity of the car and not necessitated by other repairs.

In computing charges for lumber, if finished length of the piece in odd inches is under 6 in., the half foot will be allowed for rough length; if 6 in. or over, the even foot will be allowed. Finished thickness, if under 1 in., consider as 1 in. rough; if 1 in. or over, but under 1½ in., consider as 1½ in. rough; 1½ in. or over, but under 2 in., consider as 2 in. rough; and upward on corresponding scale. The same scale will apply to width, except for matched sheathing, roofing, lining and flooring on which ¾ in. shall be added to finished face width, for rough. The total amount of each item may be charged in even feet B. M.; if fractional amount is less than ½ ft., it should be dropped.

In computing charges for bolts, nuts and forgings, if fractional weight of each entry on billing repair card is less than one-half pound, it must be dropped; if one-half pound or more, charge the entire pound.

INTERPRETATION. Q.— In charging for lumber, if a running board is dressed on one side to 1 in., can the repairing line charge for 1½ in. thickness in rough?

A.— Yes.

RULE 103. Whenever scrap credits are allowable the weights of scrap credited shall be equal to the weights of the new metal applied, except as otherwise provided in the rules, and except in the case of scrap A. R. A. couplers, and parts of same, and material applied on defect cards, in which cases the weight and kind of metal removed shall be credited.

RULE 104. Secondhand A. R. A. couplers or parts, when used in repairs shall be charged at 75 per cent of value new. Secondhand A. R. A. couplers or parts removed shall be credited at 75 per cent of value new. Credits shall be confined to the body, lock, knuckle and knuckle pin, whether secondhand or scrap. In the type "D" coupler, credit shall be allowed for all parts.

When new A. R. A. coupler is applied it shall be so charged whether or not it is of same make as that removed.

Secondhand metal brake beams when used in repairs shall be charged at prices shown in Rule 101. Defective metal beams removed, or missing beams, shall be credited at average credit price for such beam. In the case of missing beams, credit shall be allowed at average credit price according to class of beam applied.

In case of an A. R. A. metal beam substituted for a defective wooden, wooden trussed

RULE 104 — *Continued.*

or composite beam, the beam removed shall be credited at average credit price for kind of beam removed.

Where a metal beam is removed, repaired and reapplied, the charge shall be based on specified price for the secondhand beam, less average credit price for same, without additional labor charge for repairing the beam.

No additional charge shall be made, nor credit allowed, for finger guard pins, finger guard pin castings, nor safety chain clips when complete beam is applied. The finger guard pins, finger guard pin castings and safety chain clips shall only be charged when these details are applied separately.

NOTE.— The average credit price of brake beams is based on the average value of the beams removed, less labor cost of repairing, this labor cost being included in the secondhand price.

RULE 105. Manufactured articles not included in Rule 101 must be charged at current market prices.

NOTE.— Manufactured articles are those which are not subject to competitive prices, and which can only be obtained from one manufacturer or concern.

Material furnished by owners for repairs to their cars, whether for individual car or for stock, should be billed in conformity with schedule of prices shown in these rules. No store expense should be added by repairing road to the net cost of material furnished by car owner, when ordered in accordance with Rule 122.

INTERPRETATION. (1) Q.— Does the "current market price" refer to price at factory or net store

RULE 105 — *Continued.*

department cost, including factory price and freight charges?

A.— It refers to the net store department cost.

(2) Q.— Is it permissible for a road using a special grade of material in the manufacture of rivets and bolts that cost more than the ordinary material used for this purpose, to charge owner for the increased cost?

A. No. A. R. A. prices should be used.

(3) Q.— Does this rule govern the price of pressed steel parts, such as end sills, center sills, draft sills, body bolsters, truck bolsters and other pressed shapes which can be manufactured by more than one company, thus making them subject to competitive prices?

A.— They should only be regarded as manufactured articles, provided they are protected by a patent and obtainable only from one manufacturer, and are not obtainable in the open market.

(4) Q.— Can a bolster that is made by more than one steel company be considered as a manufactured article?

A.— No. It can not be considered as a manufactured article.

(5) Q.— Should a bottom outlet valve extension or nozzle, or bottom washout casting be charged at current market prices or on a per pound basis?

A.— These castings require machining, and may therefore be charged at net store department cost.

(6) Q.— Is it proper to consider the Harvey draft springs as manufactured articles, and to charge net store department cost for them; or should they be charged by weight at the price shown in Rule 101?

A.— If Harvey springs are standard to car, as equipped by owner, they may be charged at net store department cost when applied in repairs.

(7) Q.— This rule states that manufactured articles not included in Rule 101 must be charged at current market price. In the interpretation on this rule it is

RULE 105 — *Continued.*

stated that the current market price is the net store department cost. The question has been brought up of proper charge for secondhand Miner lug castings. How should charge be made for these secondhand parts which when new are charged at net store department cost?

A.— Where the net store department cost of new material can not be determined, secondhand materials of this kind should be charged on the weight basis at A. R. A. rate per pound.

(8) Q.— Is it proper to consider grip unit nuts as manufactured articles and to charge them at net store department cost; or should they be charged by weight at the price shown in Rule 101?

A.— If grip unit nuts are standard to car, as equipped by owner, they may be charged at net store department cost when applied in repairs, irrespective of one common nut being included in the weight of the bolt.

RULE 106. No percentage shall be added to bills for repairs made on and after September 1, 1920, except in the case of defect cards issued prior to that date.

For repairs made on and after October 1, 1918, and prior to September 1, 1920, thirty per cent shall be added to the net total amount of the bill, for material and labor; this provision to apply to all charges authorized in these rules, with the following exceptions:

Twenty-five per cent may be added to charges for repairs made on authority of defect card issued between January 1, 1917, and October 1, 1917; thirty-five per cent on defect cards issued between October 1, 1917, and October 1, 1918; thirty per cent on defect cards

RULE 106 — *Continued.*

issued on and after October 1, 1918 and prior to September 1, 1920; regardless of date of repairs.

No percentage to be added to bills rendered by car owners for material furnished by them for repairs to their cars on foreign lines.

No percentage to be added to freight or express charges on material furnished by owners for repairs to their cars.

No percentage to be added to bills covering settlement for destroyed cars or trucks, under Rule 112.

No percentage to be added to bills for dismantling cars nor to credits for scrap from dismantled cars.

RULE 107. The following table shows the labor charge which may be made for performing the various operations shown. Unless otherwise specified, the labor allowances include all work necessary to complete each item of repairs.

All previous decisions or interpretations of the Arbitration Committee respecting labor charges in the A. R. A. Rules then effective which in any way conflict with the instructions set forth in each item of A. R. A. Rules 98 and 107 are hereby cancelled,

RULE 107 — *Continued.*

effective with the adoption of the revised rule.

The labor charges of $1.20 per hour (Item 172, Rule 101, and Item 442, Rule 107, and $1.45 per hour, Item 443, Rule 107), in addition to including the actual labor cost of performing the work, include the following items of indirect expense:

Wages of foremen, work inspectors, clerks, laborers, etc., working on freight repairs.

Proportion of the expense of operating power plant and of wages of shop or gang foremen, shop clerks, etc., whose time is not charged direct to freight repairs.

Shop switching, including repairs, depreciation, interest, taxes, fuel, lubrication, water, other supplies, fuel station and engine house expenses, wages of enginemen and firemen, switch crews and switch tenders.

Proportion of salaries and expenses of G. S. R. S., G. S. M. P. and M. and clerks, S. R. S., S. M. P. and M. and clerks, master car builders, master mechanics and clerks, and general foremen.

EXPLANATION OF ABBREVIATIONS.

R. & R.....Removing and replacing same article.

R. & R. or R...Removing and replacing old article or removing old article and applying new one.

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
1	Advertisements, temporary, tacked, screwed or wired on car, removing, per car	1.	1.0
2	Advertisements, temporary, pasted, glued or varnished, on cars, removing, per car	2.	2.0
3	Air brake equalizer or fulcrum renewed (lever carrier), each	0.8	0.8
4	Air brake cylinder block or plate, R. & R. or R., includes R. & R. or R. of cylinder and all bolts, per block or plate	2.8	2.8
5	Air brake reservoir block of plate, R. & R. or R., includes R. & R. or R. of reservoir and all bolts, per block or plate	1.0	1.0
6	Anchor rod (bolster to dead block), one, R. & R. or R.	0.8	0.8
8	Anchor rod, head block tank car or Gould draft, renewed separately, each	1.0	1.0
10	Anchor tank band, renewed, including R. & R. or R. of Y. bolts or turnbuckle, per band	1.5	.....
12	Anchor tank band, "Y" bolt or turnbuckle, renewed, each	0.8	.....
14	Anchor straps, any length, threaded one end, renewed; allow for bolts securing same; threaded end of strap to be counted as one bolt	.....	.....
16	Arch bars R. & R. or R., one or all on same side of truck, includes jacking end of car	3.0	3.0
18	Arch bar tie strap, continuous, one R. & R. or R., including R. & R. or R. of nuts, only	1.4	1.4
20	Belt rail (solid type), or belt rail plank, or belt rail blocks and plank combined, renewed in connection with renewal of any or all adjoining posts or braces, includes R. & R. of all nails, screws, bolts or lags securing same but excluding R. & R. of siding, lining, insulation, etc., per lineal foot	0.2	0.2
21	Belt rail renewed, when not associated with renewal of posts or braces, per lineal foot, includes renewal of all nails, screws, bolts or lags securing same (does not include R. & R. of siding, lining, insulation, etc.)	0.4	0.4
22	Belt rail plank, renewed separately, when not associated with renewal of posts or braces, includes renewal of all nails, screws, bolts or lags securing same, per lineal foot (does not include R. & R. of siding), lining, insulation, etc	0.2	0.2

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
24	Bolster, body, composite, one, renewed, excluding flooring	12.7	15.7
25	Bolster, body, cast or pressed steel, with top flange, R. & R. or R. excluding flooring but including R. & R. of short draft timbers. (Side bearings and center plate not cast integral with bolster, if renewed, to be charged additional on bolt or rivet basis)	12.4	14.4
25A	Bolster, body, cast or pressed steel without top flange, R. & R. or R. (excluding flooring) when not necessitating the R. & R. of short draft timbers. (Side bearings and center plate where not cast integral with bolster to be charged additional on bolt or rivet basis when they are renewed)	7.5	8.5
26	Bolster, body, wood, one, renewed, excluding flooring	10.4	12.4
26A	Bolster, body, twin leaf metal, bottom leaf only, R. & R. or R. (not to be allowed when long draft timbers are renewed at same end at same time) (flooring excluded)	6.0	6.0
27	Bolster, body, metal, one R. & R. or R. when draft timbers extend through same, including R. & R. of draft timbers	16.0	18.0
28	Bolster, body, plain, metal, one renewed, when one or more defective center or intermediate sills are renewed or spliced at same end of car. This charge only to be made when center plate or side bearings are not cast integral with bolster	2.5	2.5
28A	Bolster, body, plain wood, one renewed, when one or more defective center or intermediate sills are renewed or spliced at same end of car	1.6	1.6
28B	Body bolsters.	.....	.....
	NOTE.—The prices for body bolsters renewed separately include jacking car.		
29	Bolster, body, composite, one renewed, when one or more defective center or intermediate sills are renewed or spliced at same end of car.	4.5	4.5
29A	No additional labor charge shall be made for renewing bolts securing wood, twin leaf or steel body bolsters to car when bolster is R. & R. or R. at the same time	.....	.....

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
30	Bolster, truck, metal, when not otherwise specified, renewed, includes jacking car and removing outside hung brake beam when necessary	7.7	7.7
30A	Bolster, truck, wood or composite, when not otherwise specified, renewed, includes jacking car and removing outside hung brake beam when necessary	11.	11.
31	Bolster, truck, one, and one bolted spring plank in same truck, renewed, including jacking car. (If riveted spring plank, use price of bolster and add spring plank rivets)	13.0	13.0
32	Bolster, truck, swing motion truck, or on types where no bolts or rivets require removal in order to remove bolster from truck, includes jacking car	3.5	3.5
33	Bolster, truck, Bettendorf, Andrews, Vulcan or Scullin type, one, renewed, including jacking and R. & R. or R. one truck side when necessary (does not include rivets or bolts of the spring plank)	6.0	6.0
34	Bolster, truck, one, renewed, when one or more truck transoms are renewed on same truck	2.0	2.0
35	Body truss rod queen post, closed, one, renewed (includes R. & R. of turnbuckle and two nuts or two lags)	1.0	1.0
36	Body truss rod queen post, closed, two on same rod, renewed (includes R. & R. of turnbuckle and four nuts or four lags)	1.5	1.5
36A	Body truss rod queen post, open, one, renewed (includes R. & R. of one truss rod nut and R. & R. of two nuts or lags securing queen post)	0.7	0.7
36B	Body truss rod queen post, open, two on same rod, renewed (includes R. & R. of one truss rod nut and four nuts or four lags for queen posts)	1.1	1.1
37	Body truss rod bolster saddle with or without bolts or lags, open, one, renewed, or replaced when out of place	0.6	0.6
38	Body truss rod washer, or body bolster truss rod washer, R. & R. or R., charge for nuts securing same	.....	.....

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
40	Body truss rod, per section renewed (includes handling only, exclusive of turnbuckle and nut).....	1.6	1.6
	NOTE.—This price also to be charged for full length rod without turnbuckle.		
42	Body truss rod, tightening and replacing on saddle, or queen post when necessary, empty car, per rod. (Use same basis for trussing entire car.).....	0.4	0.4
42A	Body truss rod, tightening, including re-replacing on saddle or queen post when necessary, loaded car, per rod. (Use same basis for trussing entire car.).....	1.0	1.0
	NOTE.—No charge for Items 42 and 42-A if end sill is slackened for other work.		
43	Braces, side or end, one, renewed, exclusive of sheathing, lining and its rod, whether or not in connection with side or end posts..	1.0	1.0
45	Brake beam, R. & R. or R., includes three connection pins in brake lever R. & R., two shoes and keys R. & R. and if necessary its two safety chain bolts or its suspension spring hanger pins; does not include the R. & R. of any brake beam safety guards, not jacking of car (when necessary) to R. & R. beams from trucks equipped with safety guards (full charge to be made when truck bolster or spring plank is renewed at same time).....	1.2	1.2
47	Brake beam, wooden truss, repairing.....	1.3	1.3
48	Brake beam guide or finger guard, one, renewed, separately.....	0.2	0.2
49	Brake beam head (wooden beam), one, renewed.....	0.8	0.8
50	Brake beam head (wooden beam), two on same beam, renewed.....	1.0	1.0
51	Brake beam safety chain separately, one, renewed, including brake beam safety chain "I" bolt or clip.....	0.3	0.3
51A	Brake beam safety guard renewed, make charge on bolt or rivet basis, plus jacking of car when necessary.....	.....	.....
52	Brake beam suspension spring hanger or link, either or both, renewed.....	0.5	0.5

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
53	Brake beam suspension spring and cap, single or double, either or both, renewed	0.8	0.8
54	Brake beam hook bolt, renewed	0.2	0.2
54A	Brake beam safety support, bolted or riveted, charge on bolt or rivet basis	.....	.....
55	Brake chain, separately, renewed	0.2	0.2
56	Brake connection, rod or lever, per connection pin	0.2	0.2
58	Brake hanger, renewed (also to be charged when brake beam is renewed at same time)	0.3	0.3
59A	Brake hanger bolt, or pin, any type, renewed separately, each	0.2	0.2
60	Brake hanger bearing, double, secured to spring plank, renewed	1.8	1.8
60A	Brake hanger secured by column bolts. Charge for column and brake hanger bolts used in securing same; allow for jacking car when necessary	.....	.....
61	Brake hanger shackle box or bearing and cap, renewed, each. (When rivets are used, same should be charged on rivet basis.)	0.8	0.8
62	Brake hanger trimmer block, renewed, each	1.5	1.5
63	Brake hanger eye bolt, separately, renewed, each	0.5	0.5
64	Brake lever guide or carrier, renewed, each	0.5	0.5
65	Brake lever guide bracket, when bolted, renewed, each. NOTE.—When riveted, charge on basis of rivets and one connection pin.	0.8	0.8
66	Brake pawl, separately, renewed	0.3	0.3
67	Brake connection pin or key bolt, any length, renewed, separately, each	0.2	0.2
68	Brake rod carrier, one renewed	0.3	0.3
69	Brake shaft, one, R. & R. or R	1.1	1.1
71	Brake shaft brace or support, separately, renewed	0.5	0.5
73	Brake shaft carrier or bow, one, charge on bolt, nut or rivet basis	.....	.....
75	Brake shaft rachet wheel, renewed, includes R. & R. of brake wheel and guide when necessary, each	0.8	0.8
76	Brake shaft step board plate, renewed only, includes R. & R. of wheel, guide and rachet, each	1.1	1.1

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
77	Brake shoes, renewed on authority of defect cards, when brake beam is not renewed or replaced, each	0.2	0.2
78	Brake step board, renewed, includes R. & R. of brake shaft	2.7	2.7
79	Brake wheel, one, renewed	0.3	0.3
82	Bolts: Carrier iron bolts, 6 in. or less, renewed in connection with R. & R. of draft timber coupler or any operation which includes same; no labor charge to be made	.....	.....
84	Center plate bolts, renewed, each (Add jacking when necessary.)	0.4	0.4
85	Center plate, R. & R. or R., to be charged on bolt or rivet basis, plus jacking of car when not already raised for other repairs	.....	.....
86	Coupler stop casting bolts, renewed, each. NOTE.—Add R. & R. of coupler or slackening same at back when this work is necessary to renew bolts.	0.4	0.4
87	Coupler follower guide bolts or draft pan bolts, renewed, including, when necessary, jacking of coupler that has shifted out of position at rear, per bolt. NOTE.—Add R. & R. of coupler or slackening same at back when this work is necessary to renew bolts.	0.2	0.2
88	Draft timber or carrier iron bolts over 6 in., separately, each	0.4	0.4
89	Journal box bolts, renewed, each (Add jacking when necessary.)	0.4	0.4
89A	Column bolts, renewed, each (Add jacking when necessary.)	0.6	0.6
90	Bolts, 6 in. or less in length, not otherwise specified, R. & R. or R., each	0.2	0.2
91	Bolts over 6 in. in length, not otherwise specified, R. & R. or R., each	0.4	0.4
91A	When charge is made for R. & R. or R. of bolts, no additional labor charge can be made for cotters, lock nuts or nut locks on same	.....	.....
92	Bolt, journal box, horizontal, when box is not renewed, charge for each bolt renewed, according to length, as per Items 90 and 91	.....	.....

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
93	Rods tightened, not otherwise specified, except when included in cost of other operations, each	0.3	0.4
94	Cap, discharge valve for tank car, one, renewed	0.5	.....
95	Cap, dome, for tank car, renewed, each	0.8	.....
96	Carline, wood, renewed from below, including R. & R. or R. of any or all bolts or latitudinal rods, securing same, each	2.0	.....
96A	Carline, wood, renewed after purlines and ridge pole are removed, or after one or two side plates are removed, each	1.1	.....
96B	Carline, wood, radial type, renewed when necessitating R. & R. or R. of all running board, 9 ft. roofing, cutting of side fascia, ridge pole and purlines and R. & R. of two sheets radial roofing, first carline	10.3	.....
97	Carline, first, replaced, when out of place	1.3	.....
97A	Carline, each additional, replaced, when out of place	0.5	.....
98	Carline, metal, renewed, exclusive of all related work after purlines and ridge pole are removed, includes handling and renewal of bolts through side plate only, per carline	1.7	.....
98A	Carline, metal, renewed after purlines, ridge pole and one or two side plates are removed, per carline	0.6	.....
99	Carrier iron, renewed, to be paid on bolt or nut basis	.....	.....
102	Carrier iron, Bettendorf type, adjusted, when turned over, each	0.5	0.5
103	Chute plank, top, middle or bottom, side, each, renewed	1.5	.....
104	Chute plank, end, each, renewed	1.0	.....
104A	Chute plank nailing girth or support, separately, each (Does not refer to hopper supporting strap.)	1.0	.....
	Column casting, includes jacking, one, renewed, separately:		
105	When bolted to spring plank	3.0	3.0
105A	When riveted to spring plank	3.2	3.2

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
	Column casting, second on same side of truck, renewed:		
106	When bolted to spring plank	1.5	1.5
106A	When riveted to spring plank	1.7	1.7
	Column castings applied in connection with R. & R. or R. arch bars or truck bolster, each:		
107	When bolted to spring plank	0.9	0.9
107A	When riveted to spring plank	1.1	1.1
108	Column guide, one or two on same end of bolster, renewed separately, including jacking, column, box and guide bolts, charge on bolt, rivet and jacking basis	.....	.....
112	Center pin, head, key or plain, renewed, including placing car on center, if necessary, empty or loaded car (excludes moving load)	1.2	1.2
114	Corner band, one, renewed separately; to be paid on bolt, nut, lag or rivet basis	.....	.....
115	Coupler pocket rivets, or short cross keys, renewed, or applied only, at shop or car, not including R. & R. of coupler (exclusive of material), each	0.3	0.3
116	Couplers, riveted or short cross key type, slackened at back for followers or springs, either or both, or when necessary to renew lug strap or stop bolts. (To be paid when it is not necessary to R. & R. coupler to make these repairs)	1.5	1.5
117	Coupler, with riveted yoke attachments, including lug straps, coupler springs, one or more follower plates, any or all parts of friction gear, R. & R. or R. (Includes R. & R. of carrier iron nuts, and, when necessary, R. & R. of outside hung brake beam)	4.0	4.0
118	No labor shall be charged for shifting back into position any coupler attachments, as the allowance for lug strap bolts and cross key covers	.....	.....
119	Coupler pocket rivets, renewed, with long stroke air hammer, where not necessary to remove coupler, each	1.0	1.0

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
120	Coupler, secured with long cross key, which extends through draft arms, or vertical pin, R. & R. or R. when gear is not removed, includes coupler, pin or key and carry iron	1.8	1.8
121	Coupler cross key (long), or vertical pin, R. & R. or R. neither coupler nor gear is removed, each	0.7	0.7
122	Coupler springs, followers, or complete gear on couplers with key attachments, R. & R. or R., when not necessary to R. & R. or R. coupler	2.2	2.2
122A	Coupler and complete gear with cross key attachments, including lug straps, coupler springs and follower plates, or friction gear, R. & R. or R. (Also includes R. & R. carrier iron bolt nuts, cross key and, when necessary, outside hung brake beam)	4.0	4.0
122B	Coupler spring rod, Cardwell, R. & R. or R., including its springs and spring seats, any or all	1.0	1.0
123	Coupler yoke bolts, renewed, one or two, at same end of car (coupler not R. & R.)	1.0	1.0
126	Coke rack cleat (wooden rack), each, renewed	0.8	.....
127	Coke rack gate (2 bars), renewed	1.0	.....
128	Coke rack gate (3 bars), renewed	1.3	.....
129	Coke rack gate guide, each, renewed	0.8	.....
130	Coke rack gate slat, each, renewed	0.8	.....
131	Coke rack stake clamp, each, renewed	0.5	.....
132	Coke rack stake clip, each, renewed	0.3	.....
133	Coke rack thimble or catch, each, renewed	0.3	.....
134	Coke rack stake, one, renewed	2.0	.....
135	Cross-tie timber, continuous wooden, renewed, separately, excludes flooring NOTE.—This price also to be charged when body bolster or end sill is R. & R. or R. at the same time.	6.0	7.0
136	Cross-tie timber, wooden, renewed when one or more defective center or intermediate sills are renewed, excludes flooring	1.5	2.0
138A	Dead block, wooden or metal, R. & R. or R. charge on bolt, nut or rivet basis. NOTE.—Rivets in connection with metal dead blocks to be charged extra.		
139	Deck bearer, upper (stock car), one, renewed	1.0	.....
140	Deck, upper, flooring, per board, renewed	0.5	.....

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
141	Door, end, old, rehanging	0.7	.....
143	Door, side, full or half, R. & R. or rehung	1.0	1.0
	NOTE.—This price is also to be charged when necessary to R. & R. doors in connection with other repairs, door fixtures to be charged extra (if necessary) when door is R. & R. or rehung.		
144	Door, side, half or full, if not entirely off rail, replaced	0.5	0.5
145	Door bar (stock car), renewed	1.0	.....
147	Door batten, vertical, or door brace (common door), long or short, nailed, renewed, each	0.3	.....
147A	Door rail, horizontal (common door), renewed, each	0.6	.....
148	Door stile, vertical (frame door), renewed separately, each	2.0	.....
148A	Door rail, horizontal (frame door), renewed (includes R. & R. or R. of first vertical stile), each	2.0	.....
	NOTE.—Above prices for stiles, rails and battens exclude R. & R. or R. of door, sheathing and fixtures.		
149	Door cap or housing (wooden or metal), R. & R. or R. includes door cap and bolts or nuts only	2.0	.....
151	Door cap block or casting, separately, one, renewed	0.3	.....
152	Door cap for small end door, renewed	1.0	.....
153	Door, end, old, rehanging on automobile car.	3.0	.....
154	Door hanger or roller, either or both, R. & R. or R.	0.5	.....
155	Door hinge, renewed, separately, each	1.0	1.0
156	Door guide bracket, R. & R. or R. each	0.5	.....
157	Door track bracket, renewed, separately, each	0.3	.....
158	Door hasp or keeper, renewed, separately (includes hasp strap)	0.5	.....
159	Door seal hook or pin and chain, one, renewed	0.1	0.1
160	Door stop, bracket or block, back, R. & R. or R., each	0.3	.....
161	Door stop, front, wooden or metal, R. & R. or R., each (also to be charged for continuous vertical back stop)	1.2	.....

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
162	Door rod (lock), one, renewed, not including door rehung	1.5	.....
164	Door rod bearing, only, one, renewed	0.5	.....
165	Door rod shoe, only, one, renewed, except when door is rehung	0.5	.....
166	Door track, top or bottom, or top track filler, renewed, either or both. (Charge rehandling or R. & R. of door and R. & R. of flashing over track, extra when necessary to do so.)	1.7	.....
169	Door handle, R. & R. or R.	0.2	.....
169A	Door wear, iron, screwed, R. & R. or R. (applies also to wear iron on sheathing back of door, door threshold wear iron or door spark strips), per wear iron	0.3	.....
170	Draft timber, one, wooden or metal (extending to bolster only), renewed, includes all carry iron bolts, when necessary, jacking car, and when necessary R. & R. of outside hung brake beam. NOTE.—Above price also to be charged for one wooden draft arm extension block.	8.3	10.3
171	Draft timbers, two on same end, wooden or metal (extending to body bolster only), renewed, includes jacking car, all carrier iron bolts when necessary. NOTE.—Above price to be charged for two wooden draft arm extension blocks.	11.4	13.4
172	Draft timber, one, wooden (extending beyond body of bolster), renewed, includes all carrier iron bolts when necessary, jacking car, and, when necessary, R. & R. of outside hung beam and lower bolster leaf	11.5	15.0
173	Draft timbers, two on same end, wooden (extending beyond body bolster), renewed, includes jacking car, all carrier iron bolts, when necessary, and, when necessary, R. & R. of outside hung brake beam and lower bolster leaf	15.5	19.0
173A	Draft arm, two on same end, metal (extending beyond and over body bolster), renewed, includes jacking car and all carrier iron bolts. (Economy, Universal and similar type)	20.0	23.5

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Refrigerator Car Hours
173B	Draft arm, one, metal (extending beyond and over body bolster), R. & R. or R., includes all carrier iron bolts when necessary, and jacking car. (Economy, Universal or similar type)	15.0	18.5
174	Draft timber, each, long or short (except Economy, Universal and similar types), renewed, in either of the following cases: When its center sill is renewed or spliced at same end	2.2	2.2
	When inner sill on cars with flanged steel bolsters is renewed or spliced from below at same end		
	When its inside end sill is renewed		
	When its flanged steel or twin leaf body bolster is renewed at same end		
175	Draft timbers, one, renewed, when its opposite center sill at same end is renewed or spliced, or when its outside end sill is renewed	3.7	3.7
176	Draft timber filler blocks, any or all, between two draft timbers, renewed, separately (no charge to be made for this block when one or two draft timbers are renewed)	2.	2.
	(This price to be charged for sub-draft timber on bottom of center sill of furniture or similar cars.)		
178	Drop end gate, replacing on authority of defect card	1.0	.....
179	End gate or planks, or end planks on gondola cars, renewed (includes removing gate when necessary, also boring of all holes necessary, and fitting), per bolt or rod	0.3	.....
187	Drop end gate cleat or stop, renewed, per bolt (including boring of holes necessary, and fitting)	0.3	.....
188	Drop end gate hinge, one, renewed. Charge on bolt basis	.....	.....
189	Drop end gate keeper or latch, one renewed.	0.5	.....
190	Drop door chain, one, renewed	0.5	.....
191	Drop door hinge, one, renewed. Charge on bolt basis	.....	.....

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
192	Drop door plank, renewed, per bolt (includes boring of holes necessary, and fitting)	0.3	.....
193	Drop door reach or connecting rod, one, R. & R. or renewed	0.5	.....
195	Drop door shaft and ratchet, either or both, renewed (latitudinal)	2.6	.....
197	Drop door shaft pawl, renewed, separately, each	0.5	.....
198	Drop door shaft key, one, renewed	0.1	.....
200	End of car jacked into place and secured when end framing is not renewed	2.0	.....
201	End plate, renewed, including setting nails in sheathing, but not renewing same, one foot of adjoining roofing on each side, or two sheets of tin, or both, all end fascia, any corner iron bolts and running board bracket bolts through plate, each	10.5	12.0
202	Fascia, or drip moulding, side or end, on cars with outside metal roofs, renewed, including R. & R. or R. of flashing, roof clips, all bolts, tie-rod nuts, or lags securing same, per lineal ft. of either or both (full charge to be made for roof sheets and fascia if renewed at the same time)	$0.13	$0.13
202A	Fascia, or drip moulding, side or end, on cars with inside metal or double board roofs, renewed, including R. & R. or R. of blocks, all bolts, tie-rod nuts or lags securing same, per lineal ft. of either or both	$0.10	$0.10
202B	Fascia, or drip moulding, side or end (secured with nails), renewed, per lineal ft. of either or both, exclusive of corner iron, door track bolts, etc	$0.05	$0.05
203	Fascia, renailing, one or two ends, or one side.	0.3	0.3
203A	Flashing or capping, tin or galvanized iron, on top of sheathing, over door tracks, under outside metal roof sheets on side plate, R. & R. or R., including cutting and forming, if necessary, per lineal ft., flashing only	$0.04	$0.04
204	Flooring boards (nailed), renewed, per lineal ft., includes all fitting for posts, stakes or floor washers (exclusive of lining, grain strips, side or end planks)	0.5	0.8

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
204A	Flooring boards, bolted, including slope or cove decking on gondola car, per sq. ft..	0.1	.....
205	Flooring boards (nailed), renewed, in connection with sill renewals, reduce ft. price for renewal of flooring boards 6 cents per lineal ft. for each sill renewed. No reduction to be made when sills are spliced.....	.....	.....
206	Flooring, short, over center sills, between drop doors, per lineal ft. (No charge to be made when center sills are renewed).....	0.2	.....
208	Follower tie strap, one, renewed.....	0.5	0.5
209	Grain strip, renewed separately, per lineal ft.	$0.05	$0.05
212	Hand rail rod or pipe, per side, separately renewed.....	1.5	.....
213	Hand rail post, including rail, removed and replaced (except riveted types).....	2.0	.....
214	Hand rail post, renewed, each additional (except riveted types).....	0.5	.....
215	Hay box, complete, renewed.....	3.5	.....
216	Hay box door, one, renewed.....	2.0	.....
217	Head block casting (tank car), one, renewed (except riveted type).....	3.0	.....
218	Hopper supporting strap (metal), wooden hopper car, renewed; to be charged on bolt basis; R. & R. or R. of chute planks to be charged additionally.		
219	Jacking car one end, including R. & R. of truck and disconnecting and connecting brakes when necessary (empty or loaded car).....	1.5	1.5
220	Journal box, on arch bar truck, first renewed, when no other work which includes jacking of car is performed on same end.....	2.5	2.5
220A	Journal box, on arch bar truck, each additional on same truck renewed or for first box renewed in connection with work, which includes jacking of car.....	1.	1.0
221	Journal box, on solid pedestal truck, first renewed, includes jacking car.....	2.7	2.7
221A	Journal box, on solid pedestal truck, second box on same axle, renewed.....	0.5	0.5
221B	Journal box, on solid pedestal truck, third box on same truck, renewed.....	1.7	1.7

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
222	Journal box, one, renewed, in connection with wheel renewals, including lid and dust guard	0.5	0.5
223	Journal box lid, one, renewed	0.3	0.3
224	Journal, truing up in lathe, one or two, on same axle. Included in wheels R. & R. or R.		
225	Journal wedge, renewed, or replaced, separately when jack is used and so specified	0.8	0.8
226	Key for center pin, separately, one, renewed	0.3	0.3
227	Ladder, metal or wooden, complete, renewed; to be charged on bolt or rivet basis	.....	.....
228	Ladder stile, metal or wooden, one renewed; to be charged on bolt or rivet basis	.....	.....
229	Ladder treads, wooden, renewed, each	0.5	0.5
230	Lag screw, renewed, each	0.1	0.1
231	Letter or number board, one, renewed	0.8	0.8
232	Lining, renewed, per square ft. (lining only)	$0.10	$0.07
233	Lining, renailing, per end or side section from door to end of car, either above or below belt rail	0.2	0.2
234	Lining, under sills or over flooring, per sq. ft.	$0.07	$0.07
235	Lining, renewed in connection with renewal of one or two posts or braces, per sq. ft.	$0.07	$0.10
236	Lining, renewed in connection with renewal of three or more posts or braces, per sq. ft	$0.04	$0.05
237	Nuts, nut locks or lock nut, any size, R. & R. or R., each	0.1	.....
239	Pedestal tie bolt or casting, either or both, renewed	0.4	0.4
240	Pedestal tie strap, one, renewed	0.5	0.5
241	Pipe hanger clamp or clip, renewed, each	0.2	0.2
242	Pipe hanger complete, renewed	0.4	0.4
242A	Pipe hanger "U" or "J" type, renewed, each	0.2	0.2
244	Pipe hanger, tightening, one or two	0.2	0.2
245	Platform end sill plank, full length, and width of end sill, renewed, or flooring in lieu thereof, excluding all bolts	0.5	0.5
246	Platform end sill plank, one-half section, renewed, or flooring in lieu thereof, excluding all bolts	0.3	0.3

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Refrigerator Car Hours
247	Posts, center, door, automobile cars, one, R. & R. to repair door (when attached to door)	1.5	.....
248	Posts, door, each, renewed, exclusive of sheathing or lining	3.1	6.
	NOTE.—Front post includes stop, back post includes R. & R. of door if necessary.		
248A	Post, side, excluding R. & R. or R. of sheathing or lining, renewed, each	2.1	4.6
249	Post, corner or end, renewed, each	5.5	8.0
	NOTE.—Corner post includes R. & R. of corner irons, grabirons and ladder treads. End post includes R. & R. running board brackets, brake shaft and dead block, if necessary. Sheathing, end door fixtures and fascia should be charged additional. No deduction to be made if coupler or draft timbers are R. & R. or R. at same end at same time.		
249A	Post or braces, metal, corner, door, end or side, R. & R. or R.; charge to be made on bolt and rivet basis.		
250	Post, corner, or end, renewed, when associated with renewal of side sill, inside end sill, side or end plate, each	2.6	3.6
250A	Post, door, renewed when associated with renewal of side sill or side plate, each	2.3	3.3
250B	Post, side, renewed when associated with renewal of side sill or side plate, each	1.3	2.3
250C	NOTE.—All post and brace renewals exclude sheathing, which is to be charged additional when necessary.		
251	Push rod guide, one, renewed	0.5	0.5
252	Push pole pocket, renewed, charge on bolt or rivet basis.		
254	Release lever, coupler, renewed, including R. & R. of one casting (whether or not in connection with R. & R. or R. of coupler)	0.8	0.8
257	Release lever bracket, coupler, renewed, separately, each	0.5	0.5
258	Renailing roofing or siding, per lineal ft. of nailing stringer	$0.01	$0.01
259	Rod, vertical tie, one, renewed, separately	0.5	0.5
261	Rod or pipe, side or center hitch (stock car), one, renewed	0.8	.....

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
262	Rod, transverse tie, applied (first application), including drawing sides of car together (applies only to open top cars), each	2.0	2.0
263	Rod, transverse tie, renewed (except first application) (applies only to open top cars), each	0.8	.....
264	Rod, longitudinal tie, full length, renewed, each	1.8	.....
265	Rod, not otherwise specified, renewed, separately, each	0.5	0.5
266	Roof boards, single, plate to ridge pole, R. & R. or R. exclusive of running board, saddles or other roof parts, per lineal ft	0.2	0.2
266A	Roof boards, double board roof, plate to ridge pole, R. & R. or R. roof boards only, per lineal ft	0.4	0.4
267	Roof boards, longitudinal, renewed, only, per sq. ft. per course	$0.06	$0.06
268	Roofing, inside or outside metal, renewed, including flashing under outside roofing where necessary, sub-carline or mullion; also R. & R. or R. of caps, clips and clip bolts or screws, but exclusive of roof and running board, per sheet (allow for replacing)	0.4	0.4
269	Roofing, inside or outside, metal extending full width of car, including caps, roof clips and bolts on outside metal roofing, and sub-carline or mullion, exclusive of roof and running board, renewed, per sheet. (Allow also for replacing.)	0.8	0.8
270	Roof cap, metal, inside or outside metal roof, renewed, exclusive of roof, roof sheet and running board, each	0.3	0.3
270A	Roof clips, screwed or bolted, outside metal roofs, renewed, separately	0.1	0.1
271	Roof binder, wood, metal or canvas, renewed separately, per lineal ft	$0.04	$0.04
272	Roof purline, nailed or screwed, renewed, after all roofing over same is renewed, per lineal ft	$0.02	$0.02
	NOTE.—No deduction to be made from purlines when end plates or carlines are renewed at same time.		

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
272A	Roof purline, or ridge pole, bolted, renewed, after all roofing over same is renewed, charge on bolt basis.		
273	Roping staple, renewed, each	0.5	.....
275	Running board, latitudinal, from side ladder to longitudinal running board, secured by screws, renewed, per single board	0.2	0.2
275A	Running board, latitudinal, from side ladder to longitudinal running board, secured by bolts, renewed, per single board	0.4	0.04
276	Running board, latitudinal, from side ladder to longitudinal running board, with bolted or screwed boards, renewed, complete	4.5	4.5
276A	Running board, latitudinal, as above, R. & R. only for repairs to outside metal roof	1.2	1.2
277	Running board, when screwed to saddles, longitudinal, complete, renewed, including all running boards, all bolted saddles, extension blocks and brackets, per car	8.2	8.2
277A	Running board, as above, when saddles are screwed to car, per car	6.	6.
278	Running board, longitudinal, when screwed to saddles, renewed, per lineal ft. per single board (Full charge to be made for saddles renewed in connection with running board.)	$0.05	$0.05
278A	Running board, longitudinal, when bolted to saddles, renewed, to be paid on bolt basis.		
278B	Running board, tank car, end or side, renewed; per lineal ft., including all bolts, fitting and boring	$0.11	.....
279	Running board to secure with screws, per lineal ft. of single board	$0.01	$0.01
280	Running board saddle, when bolted, renewed, whether or not running board over same is R. & R. or R. (full price to be charged for any running board R. & R. or R. at same time), per saddle	0.2	0.2
280A	Running board saddle, all others renewed, as above, per saddle	0.1	0.1
281	Running board brackets, renewed, including bolts or nuts securing same, per bracket	0.5	0.5
283	Running board extension block, renewed, including bolts or nuts securing same and fitting, per block	0.6	0.6

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
286	Safety chain hook or link (end sill), renewed, each	0.4	.....
288	Safety valve, tank car, one or more, testing valve on car and restenciling tank, per car	2.0	.....
288A	Safety valve, tank cars, grinding in, when not necessary to machine same, each	0.5	.....
288B	Safety valve, tank cars, adjusting, per valve	1.0	.....
289	Screws, wood, R. & R. or R., each	$0.01	$0.01
290	Sheathing, when bolted to wooden or steel posts and braces, on box or automobile cars, with sheathing only, renewed, including bolting, per sq. ft	$0.10	.....
291	Side bearing, or side bearing rollers, or friction members which necessitate removal of side bearing R. & R. or R.; charge on lag screw, bolt or rivet basis. (If necessary to raise car, charge additional)	.....	.....
291A	Side bearings, friction adjusted or side bearing roller applied when it is not necessary to renew side bearing (exclusive of jacking)	0.7	0.7
293	Spring plank, bolted to column casting, renewed, separately	9.1	9.1
293A	Spring plank, riveted to column casting, renewed, separately	10.	10.
294	Spring plank, Bettendorf, Andrews, Vulcan or Scullin type, renewed, including R. & R. both truck springs, but excluding spring plank rivets or bolts	3.0	3.
295	Side plank on gondola cars, per bolt, includes boring of all holes, necessary and fitting	0.3	.....
296	Side plate, renewed. (Includes R. & R. or R. of any or all corner irons or roofing in connection with plate, running board, fascia, setting nails in renailing, sheathing, but not renewing sheathing)	40.	50.
296A	Side plates, two, renewed. (Includes R. & R. or R. of any or all corner irons or roofing, running board, fascia, also setting nails and renailing sheathing, but not renewing same)	70.	90.
297	Side plate, spliced, including same work as side plate renewals, per ft	1.3	2.5
298	Slats, side or end (stock car), nailed or screwed, renewed, each	0.5	.....

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
299	Slats, side or end (stock car), bolted, renewed, per bolt	0.3	.....
300	Sheathing (exclusive of all trimmings, corner bands, door tracks, fascia, dead block, door fixtures, etc.), renewed, per lineal ft.	0.6	.....
301	Sheathing, as above, when nails are set and holes puttied, renewed, per lineal ft.	.....	0.7
301A	Sheathing, side or end, renewal in connection with renewal of sill, plate or belt rail; reduce renewal price of sheathing 0.1 hours, per lineal foot for each sill, plate or belt rail, renewed. No deduction to be made when side plate, sill or belt rail is spliced.	.....	.....
303	Sheathing, short, above or below door opening, R. & R. or R., exclusive of fixtures, per lineal ft.	0.1	0.1
303A	Side door trimming board, above or below door opening, R. & R. or R., exclusive of fixtures, each	0.3	0.3
305	Sheave wheel, in brake rod, renewed, each	0.5	0.5
306	Sill nailing girth, over center or intermediate sills of steel or steel underframe cars, renewed or spliced when flooring over same has been removed, or sill nailing girth over end or side sills renewed or spliced when flooring and posts have been removed — per lineal ft., including bolts or rods securing same	0.1	0.1
306A	Sill nailing girth, over side or end sills of steel or steel underframe cars, renewed or spliced when sheathing has been removed but when all posts and flooring over same have not been removed—per lineal foot, including bolts or rods securing same but excluding R. & R. of roofing necessary to R. & R. rods	0.6	0.6
307	Sill step, bolted, R. & R. or R., each	0.7	.....
310	Sill splices, renewal of, charge same as original splicing	.....	.....
310A	Sill renewals, or splices (longtitudinal)	.....	.....
	NOTE.—Make following labor charges whether or not wooden cars are equipped with what are commonly known as repair steel underframes.		

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
	NOTE.—Make following labor charges whether or not flooring over sills or splices is partly or entirely renewed at same time. When flooring is renewed at same time, make proper labor charge as per Item 205 and 206.		
	NOTE.—All sill prices include jacking of car.		
311	Sills, short stub, bolted to side of full length single center sill, and extending from end sill to point back of body bolster, and to which draft timbers are bolted.		
	One, renewed, same end	18.5	.....
	Two, renewed, same end	23.0	.....
312	One center sill splice, applied or renewed, exclusive of flooring	24.6	32.6
313	Two center sill splices, same end, applied or renewed, exclusive of flooring	30.0	40.0
314	One center sill, renewed	49.0	71.0
315	Two center sills, renewed	57.0	85.0
316	One end sill, under siding, renewed, including setting nails through and renailing end siding but not renewing same, R. & R. or R. of any or all corner irons, dead block and R. & R. of draft timbers and coupler, when necessary	18.0	22.0
317	One end sill, outside of siding, renewed, includes R. & R. or R. of plank. No extra charge for coupler renewed at same time.	8.8	8.8
318	One end sill, under siding, renewed, when one or more defective sills are renewed or spliced	8.0	10.0
319	One end sill, outside of siding, renewed, including R. & R. or R. of plank, when one or more defective sills are renewed or spliced	5.0	5.0
320	One end sill, outside of siding with end posts tenoned into same, renewed	12.0	.....
320A	One end sill, outside of siding, with end posts tenoned into same, renewed when one or more defective sills are renewed or spliced	6.0	.....
321	One intermediate sill, renewed	37.0	59.
322	One intermediate sill, short, for hopper cars, renewed	14.0	.....
323	Two intermediate sills, short, for hopper cars, at one end of car renewed	16.0	.....

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
324	Intermediate sill, short, for hopper cars, renewed, when one or more full length sills are renewed or spliced at same end, each..	2.0	.....
325	Two intermediate sills, renewed.....	41.0	76.
326	Three intermediate sills, renewed.....	44.0	91.0
327	Four intermediate sills, renewed.....	47.0	106.
328	One intermediate sill and one center sill, renewed.....	50.0	84.0
329	One intermediate sill and two center sills, renewed.....	59.0	99.0
330	Two intermediate sills and one center sill, renewed.....	57.0	103.0
331	Two intermediate sills and two center sills, renewed.....	66.0	118.0
332	Three intermediate sills and one center sill, renewed.....	64.0	122.0
333	Three intermediate sills and two center sills, renewed.....	73.0	137.0
334	Four intermediate sills and one center sill, renewed.....	71.0	141.0
335	Four intermediate sills and two center sills, renewed.....	80.0	150.0
336	One intermediate sill, spliced.....	19.0	25.
337	One side sill and one center sill, renewed....	64.0	96.
338	One side sill and two center sills, renewed...	68.0	106.0
339	Two side sills and one center sill, renewed..	75.0	117.0
340	Two side sills and two center sills, renewed.	84.0	132.0
341	One side sill, spliced, includes same work as shown for side sill, renewed.....	10.	14.5
342	One side sill, renewed, includes R. & R. of fixtures securing same, setting nails and renailing siding but not renewing same, or on gondola cars the R. & R. of side stakes or raising coal side if done to renew sill...	30.	49.
343	Two side sills, renewed, includes same work as above.....	46.0	77.0
344	One side sill and one intermediate sill, renewed.....	55.0	88.0
345	One side sill and two intermediate sills, renewed.....	57.0	101.
346	One side sill and three intermediate sills, renewed.....	60.0	117.0
347	One side sill and four intermediate sills, renewed.....	67.0	135.0

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
348	Two side sills and one intermediate sill, renewed	62.0	105.0
349	Two side sills and two intermediate sills, renewed	69.0	124.0
350	Two side sills and three intermediate sills, renewed	76.0	143.0
351	Two side sills and four intermediate sills, renewed	83.0	162.0
352	One side sill, one intermediate and one center sill, renewed	66.0	110.0
353	Two side, one intermediate and one center sill, renewed	82.0	136.0
354	One side, two intermediate and one center sill, renewed	73.0	129.0
355	Two side, two intermediate and one center sill, renewed	94.0	160.0
356	One side, three intermediate and one center sill, renewed	80.0	148.0
357	Two side, three intermediate and one center sill, renewed	96.0	174.0
358	One side, four intermediate and one center sill, renewed	87.0	167.0
359	Two side, four intermediate and one center sill, renewed	103.0	193.0
360	One side, one intermediate and two center sills, renewed	75.0	125.0
361	Two side, one intermediate and two center sills, renewed	91.0	151.0
362	One side, two intermediate and two center sills, renewed	82.0	144.0
363	One side, three intermediate and two center sills, renewed	89.0	163.0
364	One side, four intermediate and two center sills, renewed	96.0	182.0
365	Two side, two intermediate and two center sills, renewed	98.0	170.0
366	Two side, three intermediate and two center sills, renewed	105.0	189.0
367	Two side, four intermediate and two center sills, renewed	112.0	208.0
368	Each side or intermediate sill spliced when longitudinal sills have to be renewed, or when other sills are spliced at same end. NOTE.—Side sill splicing includes same work shown for side sill renewals.	5.0	8.0

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
369	One center sill spliced, when intermediate or side sills have to be renewed	12.0	16.0
370	One center sill spliced when other center sill has to be renewed	8.0	10.0
371	Two center sills, spliced, when intermediate or side sills have to be renewed	20.0	27.0
372	Sill stiffener or compression timber, renewed separately; charge on bolt or lag basis	.....	.....
373	Sill stiffener or compression timber, nailed, per section, renewed	0.5	0.5
374	Stakes, end or side, on gondola cars, separately, renewed, each	1.6	.....
375	Stake pocket, inside or outside, renewed; charge on bolt or rivet basis	.....	.....
381	Striking plate, renewed, separately; charge on bolt or nut basis	.....	.....
383	Sub-flooring between sills, including cleats, when not associated with sill renewals, refrigerator cars, per lin. ft. per course	.....	$0.10
384	Sub-flooring, between sills, including cleats, whether or not in connection with sill renewals, ordinary cars, per lin. ft. per course	$0.10	.....
385	Tank head blocks, not including castings, renewed, each	4.0	.....
386	Tank head block castings, renewed, each	3.0	.....
387	Tank raised to apply draft bolts, empty car, per end	4.0	.....
388	Tank raised to apply draft bolts, loaded car, per end	6.0	.....
389	Train pipe replaced and tightened, when shifted	1.0	1.0
390	Truck, R. & R., including disconnecting and connecting brakes (empty or loaded car)	1.5	1.5
391	Truck hanger (swing motion truck), renewed, includes jacking car	3.5	3.5
392	Truck hanger, two, same end of car (swing motion truck), renewed, includes jacking car	4.0	4.0
395	Truck hanger pin, separately (swing motion truck), renewed, includes jacking car	2.0	2.0
397	Truck hanger pin seat, renewed, includes jacking car	2.5	2.5
398	Truck side, cast steel, renewed separately, not including spring plank rivets or bolts	5.8	5.8

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
399	Truck side, cast steel, two on same truck, renewed, not including spring plank rivets or bolts	7.3	7.3
400	Truck spring, replacing, one or cluster, when out of place, loaded or empty car	0.8	0.8
401	Truck springs, one or all, in same cluster, renewed, when car has been raised for other repairs. (Not to be used when Item 101 in Rule 101 is charged.)	0.5	0.5
401A	Truck springs, as above, renewed, when car has not been raised for other repairs	1.0	1.0
401B	Truck springs, one or all, in same cluster, renewed when it is necessary to R. & R. two column and two box bolts, also to jack car and bolster	3.0	3.0
401C	Truck springs, one or all, in same cluster, renewed when it is necessary to R. & R. two column and two box bolts, after car is raised for other repairs	2.5	2.5
402	Truck transom, wooden, renewed	10.0	10.0
403	Truck transom, two, wood, renewed, in same truck	12.0	12.0
404	Truck truss rod, outside, renewed, separately (including jacking car), each	2.0	2.0
405	Truck truss rod, center, renewed (including jacking car), each	9.0	9.0
408	Truck truss rod saddle, renewed separately, each	2.0	2.0
409	Truss rod, body bolster, renewed, each	1.5	1.5
413	Truss rod across end of car, renewed, each	1.0	1.0
414	Trussing truck bolster, empty car	1.0	1.0
415	Trussing truck bolster, loaded car	1.5	1.5
416	Truss rod or other turnbuckles, renewed, separately, each	0.7	0.7
417	Turnbuckle lock, renewed, separately, each	0.3	0.3
417A	Underframe, steel (repair type) secured under sills of wooden cars, including those which necessitate removal of center sills at first application, allow for R. & R. of underframe and trucks when necessary to R. & R. same for renewals of top gusset plates over cross ties, center girders, bolster stiffeners or other parts of steel underframe (excludes R. & R. or R. of flooring). NOTE.—This item not to be charged in connection with sill renewals.	30.0	40.0

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
418	Weighing and restenciling stock cars, net, non-per diem	$2.10	.....
419	Weighing and restenciling other cars, net, non-per diem	$1.80	$1.80
419A	Weighing and stenciling all per diem cars, net	$3.60	$3.60
419B	Restencilling standard capacity markings when car is not reweighed, includes obliterating present markings, per car	$0.75	$0.75
420	Wheels, cast iron or cast steel, R. & R. or R., including jacking car, pressing wheels, off and on, boring wheels, all necessary machine shop labor on new or secondhand axles.		
420A	Bettendorf trucks, first pair	6.5	6.5
420B	All other trucks, first pair	5.4	5.4
420C	Bettendorf trucks, second pair, same truck	2.8	2.8
420D	All other trucks, second pair, same truck	3.9	3.9
	Above prices also to be charged for renewal of wrought steel or steel tired wheels, but not for removal, turning and replacement of same.		
	Wheels, wrought steel or steel tired, removing, turning and replacing, including jacking car, and, if necessary, pressing wheels off and on and boring same, also all machine shop labor on new or secondhand axles necessary (not to be charged when renewed only):		
420E	Bettendorf trucks, first pair	8.3	8.3
420F	All other trucks, first pair	7.2	7.2
420G	Bettendorf trucks, second pair, same truck	4.6	4.6
420H	All other trucks, second pair, same truck	5.7	5.7
420I	Each of the above wheel prices is based on average condition of wheels and axles, and no deductions will be allowed from any price when any of the stipulated machine shop operations are not performed. No additional charge for truing journals.		
421	When necessary to remove load to make repairs at one end of car	3.5	3.5

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
421A	Blacksmith labor only—includes straightening, repairing or threading any or all parts when off car, per lb..... (Above price also to be charged for welding of all permissible parts on anvil but is not to be used for electric or acetylene welding, which should be charged at cost.)	$0.018	$0.018
428	When any item is applied only and not removed, the full renewal labor price will be used unless allowances shown for application only.		
429	In all cases where more than one item of repairs is made on a car, each of which specifies that jacking is included, each item of repairs except the initial one should have its labor charge reduced 1.5 hr. in order to provide for the overlapping labor brought about by the removal of the truck or the jacking up of the car.		
430	When the nut on any bolt over 6 in. in length is removed in connection with overlapping repairs on metal parts, the labor charge for that bolt, if renewed, shall be reduced one-half.		
431	When the nut on any bolt over 6 in. in length is removed in connection with overlapping repairs, on metal parts, the labor charge for that bolt, if renewed, shall be reduced by $\frac{1}{10}$ of an hour.		
432	The allowance for wooden parts R. & R. or R., unless otherwise specified, includes renewal of all bolts or lags securing same; no deduction to be made if nuts only are removed.		
433	R. & R. or R. of all items not specifically covered in these rules, which are secured by bolts, nuts, lags, screws or rivets, to be charged on that basis.		
434	Bolt, "U," charge as two bolts, length to be determined by measurement through wood and iron only.		
435	When no combination prices are shown for such repairs as renewal of plates and sills or end and side plates at same time, no deductions shall be made from price shown for each item.		

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
436	No additional labor is to be charged for painting, as same is included in renewal price of all items. **Repairs of steel cars, or steel parts of composite cars:** All rivets renewed include the removal of rivets, fitting, reaming, necessary drilling and applying. Also to be charged for rivets applied only, when applying patches or splices, including necessary cutting of joints with acetylene or air chisel, drilling all holes, reaming, fitting and applying rivets: (The following rivet prices also to be charged for renewal of rivets securing end gates, end planks, drop doors and fixtures, and side planks):		
439	½ in. diameter or over, per rivet, applied, net	$0.45	$0.45
440	¼ in. diameter and less than ½ in., per rivet, applied, net NOTE.—Rivets used in fabricating end sills, cross ties, body bolsters or braces not to be charged at above rates.	$0.28	$0.28
441	Straightening, repairing or welding parts removed from damaged cars, including necessary fuel and power, per 100 lb. (Does not include oxy-acetylene or electric welding, which is to be charged at cost.)	$1.80	$1.80
442	Straightening or repairing parts in place on damaged cars; also any part that requires straightening, repairing or renewing, not included on rivet basis, per hour	$1.20	.....
443	Repairs of steel tanks of steel cars; labor repairing and testing, per hr	$1.45	.....
444	Steaming, per tank, including steam, per car	$5.20	.....
445	Water for testing, per 1000 gal	$0.08	.....
446	In making repairs to cars on a rivet basis, the cost of removing and replacing fixtures not secured by rivets, but necessarily removed in order to repair or renew adjacent defective parts, should be in addition to the rivet basis; rules covering wood-car repairs to govern.		

RULE 107 — *Continued.*

Ref. No.	OPERATION	Hours Ordinary Car	Hours Refrigerator Car
	Dismantling cars on authority of owners:		
	Dismantling wood constructed cars, including trucks and all work necessary, including handling, sorting and weighing scrap:		
447	Box, stock and other house cars, except refrigerators	$27.00	.....
448	Flat cars	$18.00	.....
449	Gondola or hopper car having sides over 36 in	$25.20	.....
450	Gondola or hopper car having sides 36 in. and under	$21.60	.....
451	Refrigerator	.....	$32.40
452	Deduct $5.40 from the above prices when trucks are not dismantled.		

INTERPRETATION. (1) Q.— It was necessary to shift the load to clear the brake shaft on account of the load being shifted so as to obstruct the proper working of the same. Is a charge against the owner a proper one?

A.— The readjustment of a shifted load is not a proper charge against the car owner.

(2) Q.— In connection with Arbitration Case 793, is it proper to make charge, for either labor or material, for applying wooden truss-rod blocks when metal truss-rod saddles are standard to the car, regardless of whether or not the car is stenciled indicating that metal saddles are standard?

A.—No bill should be rendered.

(3) Q.— Does item No. 421, which provides a charge of 3.5 hours when neessary to remove load at one end of car, apply to any and all cases where a load or any part of it might be moved, or is it intended to cover

RULE 107—*Continued.*

such substantial work as removing load to apply draft bolts, center-plate bolts, etc.?

A.— The charge is an arbitrary one, and applies in all cases.

(4) Q.— Is it permissible to make a labor charge for replacing a brake beam which has dropped down, due to brake shoe and key missing?

A.— No labor charge should be made other than is provided for in the material charge of the new brake shoe and key.

(5) Q.— Can a labor charge be made for painting made necessary on account of damaged parts on other than tanks of tank cars?

A.— Material charge only is proper, except when parts repainted are not renewed or otherwise repaired. The labor of applying the part renewed or replaced includes the labor of repainting.

(6) Q.— What is the proper labor charge for replacing a coupler cross key which is shown on repair card as shifted and requires only part replacement?

A.— No labor should be charged in such case.

(7) Q.— Inasmuch as all-steel cars are being destroyed on authority of owner, what would be proper charge for doing the work?

A.— Until such time as arbitrary charges are designated, the actual time of doing the work should be charged, the labor being charged at $1.20 per hour.

(8) Q.— How shall the end of a car be secured to justify charge covered by item 200 of this rule?

A.— The end framing, either whole or in part, when pushed out, must be replaced and secured by anchor rods, bolts, corner bands or by some substantial means, other than nailing, to justify charge.

(9) Q.— As repairs of steel tanks of tank cars are made on a per-hour basis, should labor of painting parts repaired on a per-hour basis be charged as boilermaker's labor or as ordinary labor?

RULE 107 — *Continued.*

A.— Painting is a separate operation, and the charge should be at the rate of $1.20 per hour. This is confined to tank car repairs.

(10) Q.— Should charge be made against foreign line for welding coupler head?

A.— The welding of coupler heads has not been approved by the Association and no charge should be made.

(11) Q.— How shall the fractional feet be charged for items 204, 204-A, 205, 206, 266, 266-A, 267, 271, 272, 300, 301, 301-A, 303, 306 and 306-A?

A.— The price per lineal foot shall be charged for any fraction of a lineal foot.

RULE 108. No labor to be charged for the inspection of cars, testing or adjusting brakes, adjusting angle cocks, tightening unions, nuts or lag screws or spreading cotters; sill steps, ladder treads or handholds, tightening or straightening on car; brake shafts or uncoupling levers straightened when not removed from car.

No charge to be made for the material or labor of lubrication, except as provided in Rule 66.

RULE 109. When it is necessary to apply an A. R. A. coupler complete, on account of a broken or missing knuckle or lock, the usual labor charge for replacing a coupler can be made.

RULE 110. Vacant.

RULE 111. 1. When angle cocks, cut-out cocks, pressure retaining valves and release valves,

RULE III — *Continued.*

or detail parts of same, are renewed, ground in or otherwise repaired, account defective or missing, charge shall be made for complete cock or valve and average credit allowed according to prices shown in Rule 101.

2. The following table shows the labor charges allowable for air-brake repair work. The letters "R. & R." mean "removed and replaced."

3. Whenever the number of bolts or nuts securing triple valve, triple cylinder cap or check case differs from the number specified in following prices or details, no deductions or additions shall be made in the labor charges.

	Charge Cents
4. Connections: Pipe, pipe fittings, air hose, angle cock, cut-out cock, release valve, retaining valve or strainer, R. & R., for each connection made (disconnected and connected, or connected only)	11
NOTE.—No labor to be charged for bending pipe in connection with R. & R. of same. No additional charge to be made for lag screws or bolts in retaining valve R. & R. when the valve is renewed, repaired or cleaned. No overlap labor will be deducted when air hose is renewed and angle cock renewed or repaired.	
5. Cylinder, R. & R., detachable	83
6. Cylinder, R. & R., combined type	106

DETAILS	Cents
Push rod (1 connecting pin)	11
Clamping piston (1 cap screw)	7
Cylinder head, R. & R. (4 nuts, ½ in., 3½ cents each)	14
Disconnecting cylinder from reservoir (7 nuts, ½ in., 3½ cents each)	25
Reclamping cylinder piston (1 cap screw)	7
Removing cylinder from car (6 nuts, ⅝ in., 7 cents each)	42
Total	106

RULE III — *Continued.*

	Charge Cents
7. **Cylinder and reservoir, R. & R.**	145
DETAILS — Cents Removing push rod (1 connecting pin) — 11 Removing cylinder head (4 nuts, ½ in., 3½ cents each) — 14 Removing cylinder from car (6 nuts, ⅝ in., 7 cents each) — 42 Removing reservoir from car (2 nuts, ⅝ in., 7 cents each) — 14 Removing release rods — 14 Removing release valve — 7 Removing 2 plugs — 7 Removing triple (2 nuts, ⅝ in., 7 cents each) — 14 Disconnecting train pipe union — 11 Disconnecting retaining pipe union — 11 Total — 145	
8. **Cylinder and reservoir, tightened when loose** (8 nuts, 3 cents each)	24
9. **Eliminated.**	
10. **Cylinder-release springs, R. & R.**	39
DETAILS — Cents Removing push rod (1 connecting pin) — 11 Clamping cylinder piston (1 cap screw) — 7 Removing cylinder head (4 nuts, ½ in., 3½ cents each) — 14 Reclamping cylinder head (1 cap screw) — 7 Total — 39	
11. **Cylinder gasket, R. & R.**	93
DETAILS — Cents Disconnecting triple union — 11 Disconnecting retaining pipe union — 11 Disconnecting reservoir block (2 nuts, ⅝ in., 7 cents each) — 14 Disconnecting reservoir from cylinder (7 nuts, ½ in., 3½ cents each) — 25 Removing push rod (connecting pin) — 11 Clamping cylinder piston — 7 Removing release rod — 14 Total — 93	

RULE III — *Continued.*

	Charge Cents
12. Cylinder gasket, renewed, when cylinder is cleaned same time	54
13. Eliminated.	
14. Eliminated.	
15. Eliminated.	
16. Eliminated.	
17. Cylinder push rod, R. & R. or R. (1 connecting pin).	11
18. Dirt collector in branch pipe, cleaned, drained and stenciled	22
19. Dirt collector, R. & R. only	11
20. Oil plugs, R. & R., each	7
21. Release-valve rod, removed and replaced (including repairs, if necessary)	11
22. Reservoir, R. & R.	103

DETAILS	Cents
Removing from car (2 nuts, ⅝ in., 7 cents each)	14
Disconnecting from cylinder (7 nuts, ½ in., 3½ cents each)	25
Removing release rods	14
Removing release valve	7
Removing 2 plugs	7
Removing triple valve (2 nuts, ⅝ in., 7 cents each)	14
Disconnecting unions	11
Disconnecting union, retaining pipe	11
Total	103

23. Retaining valve, R. & R., and cleaned only	36
24. Triple valve gasket, renewed	36

NOTE.—Not to be allowed when triple valve is oiled, cleaned or removed for other repairs.

DETAILS	Cents
Disconnecting branch pipe union	11
Disconnecting retaining pipe union	11
Removing triple (2 nuts, ⅝ in., 7 cents each)	14
Total	36

25. Triple-cylinder cap, R. & R. (3 nuts, ½ in., 3½ cents each)	11
26. Triple-cylinder cap gasket, renewed, when triple valve is not R. & R., and cleaned (3 nuts, ½ in., 3½ cents each; gasket, 7 cents)	18
27. Triple emergency valve, rubber seat, R. & R., when triple valve is not C. O. T. & S	36
28. Threading one end of pipe	18

RULE 111 — *Continued.*

	Charge Cents
29. Cleaning, oiling and repairing triple valve and brake cylinder, when done at the same time, including the testing and stenciling as per Rule 60, exclusive of renewal of triple valve body, cylinder non-pressure head, cylinder piston and cylinder piston packing leather (material), and renewal of cylinder body and cylinder pressure head (labor and material). Average charge	492

DETAILS	Cents
Train pipe union, disconnected	11
Retaining pipe union, disconnected	11
Removing triple (2 nuts, 5/8 in., 7 cents each)	14
Check-valve case (2 cap screws)	7
Emergency valve seats	18
Cylinder cap (3 bolts)	11
Cleaning, testing, stenciling and repairing triple valve, including material	232
Removing push rod (1 connecting pin)	11
Clamping cylinder piston (1 cap screw)	7
Removing cylinder head (4 nuts, 1/2 in., 3½ cents each)	14
Cleaning, testing, repairing and stenciling cylinder	156
Total	492

INTERPRETATION. (1) Q.—Item 4, explanatory note, reads: "No overlap labor will be deducted when air hose is renewed and angle cock renewed or repaired." It would appear that this rule conflicts with Rule 101, Items 1 and 3, and Item 4 of Rule 111. Is it the intention that charge of six cents should be made for each application of new air hose and angle cock, or should the charge mentioned only apply when these parts are removed and replaced in connection with other repairs?

A.—There is no confliction. The prices specified in Rule 101, Items 1 and 3, include the labor of application, while Rule 111 provides that no reduction shall be made, insofar as the overlap labor is concerned.

SETTLEMENT FOR DESTROYED OR DAMAGED CARS.

RULE 112. (a) When the body or trucks of a foreign car are destroyed or badly damaged the owner shall, upon request, furnish depreciated reproduction value of the car complete, and the party responsible shall have the option of repairing or settling under the depreciated reproduction value.

Depreciation to be figured from the date that the car was originally built or rebuilt, according to the requirements of this rule hereinafter set forth.

If it is decided not to repair, the owner shall be immediately advised.

(b) The reproduction cost for use in settlement for cars destroyed shall be as follows:

NOTE.— The reproduction cost is the product of the pound prices set forth below and the stenciled light weight of the car at time of loss.

	PRICES PER POUND.			
	Hopper.			
	Refrigerator.	Box.	Coke.	All Others.
Class A. All steel	.....	$0.0686	$0.0647	$0.0625
Class B. Steel underframe with steel superstructure frame	$0.0693	.0645	.....	.0610
Class C. All steel underframe	.0793	.0635	.0610	.0610
Class D. All wood, with continuous metal center sill construction, with not less than 24 in. of sectional area between draft back stops, and with not less than one top or bottom cover plate from draft back stops to draft back stop	.0793	.0635	.0610	.0610

RULE 112 — *Continued.*

	PRICES PER POUND.			
	Hopper.			
	Refrigerator.	Box.	Coke.	All Others.
Class E. All wood, with not less than 8-in. continuous metal center sills of not less than 18 lb. per ft. per member, with not less than one top or bottom cover plate from bolster to bolster.				
All wood, with not less than 8-in. continuous metal draft of not less than 18 lb. per ft. per member, with not less than one top or bottom cover plate from bolster to bolster.				
All wood, with not less than 8-in. continuous metal draft of not less than 18 lb. per ft. per member, securely fastened to wooden center sills not less than 4 in. by 8 in.....	.0734	.0569	.0569	.0569
Class F. All wood.....	.0677	.0512	.0512	.0512

STEEL TANK CARS—COMPLETE.

	Classes I and II.	Class III.	Class IV.	Class V.
Without heater pipes.....	$0.0694	.....	$0.0732	Reproduction cost.
With heater pipes	.0740	.....	.....	.....

For cars equipped with cast-steel wheels, an additional allowance of $30.00 per car shall be made.

For cars equipped with wrought-steel wheels, an additional allowance of $80.00 per car shall be made.

These allowances are in addition to the per pound price, which is included in the weight of the car.

NOTE 1.— Cars which do not conform to Classes A, B, C, D, and E, such as metal draft arms bolted to wooden sills, and

RULE 112 — *Continued.*

cars with center sill sections, cover plates, etc., below those specified, shall be settled for as all wood cars under Classs F.

NOTE 2.— Where cast or pressed steel extensions are used and riveted to metal center or draft sills between bolsters, they shall be considered as continuous.

NOTE 3.—Cover plate may be part top and part bottom, providing the specified length is covered.

NOTE 4.—The reproduction costs cover the cost of car complete.

(c) Rate of Depreciation to be Used in Settlement for Destroyed or Damaged cars. Straight Depreciation Basis.

NOTE 1.— These rules are for the purpose of settlement between carriers and private lines, for destroyed or damaged cars handled under the Rules of Interchange, and are not intended to be applied to cars of the same particular types in the accounting of individual carriers.

All steel .....3 per cent.

Steel underframe with steel superstructure frame .....3 per cent.

All steel underframe .....3 per cent.

All wood, with continuous metal center sill construction, with not less than 24 in. of sectional area between draft back stops, and with not less than one top or bottom cover plate from draft back stops to draft back stops.....3½ per cent.

RULE 112 — *Continued.*

All wood, with not less than 8 in. continuous metal center sills of not less than 18 lb. per foot per member, with not less than one top or bottom cover plate from bolster to bolster

All wood, with not less than 8 in. continuous metal draft of not less than 18 lb. per foot per member, with not less than one top or bottom cover plate from bolster to bolster.

All wood, with not less than 8 in. continuous metal draft of not less than 18 lb. per foot per member, securely fastened to wooden sills not less than 4 in. x 8 in. .....3¾ per cent.

All wood .....4 per cent.

All other cars.....4 per cent.

Tank car tanks for non-corrosive commodities .....3 per cent.

Tank car tanks for corrosive commodities of any construction.....5 per cent.

NOTE 2.— Depreciation rates as applying to different class of cars include trucks and air brakes.

NOTE 3.—A steel superstructure frame car indicates a car having the side and end uprights, braces and plates riveted together.

NOTE 4.—Allowances for depreciation shall in no case exceed 80 per cent of the value new.

NOTE 5.— On cars damaged or destroyed after March 1, 1919, depreciation shall be figured from month of the year built to month of the year damaged or destroyed. No fractional parts of a month to be considered.

RULE 112 — *Continued.*

REBUILT CARS.

(d) A car may be considered as rebuilt and be so stenciled, when the cost of repairs(including additions and betterments) exceeds one-half of the cost of reproduction at actual cost new in kind at date of rebuilding, as shown in Section B of this rule on cars of similar type, provided the car, as to couplers, wheels and axles, brake equipment, and center sill and end construction, was made to conform with the then existing A. R. A. Standard for reinforcing equipment.

RULE 113.— For the mutual advantage of railway companies interested, the settlement for a car owned or controlled by a railway company, when damaged or destroyed upon a private track, shall be assumed by the railway company delivering the car upon such tracks.

When a car owned or controlled by a railway company is damaged or destroyed on the tracks of a road which is not a member of the per diem rules agreement of the American Railway Association, the road responsible for the per diem while in the possession of the non-subscriber shall be responsible to the owner for damage to or destruction of the car.

RULE 114. If the company on whose line the car is destroyed elects to rebuild the car, the original plan of construction must be followed, and the original kind and quality of materials used except that metal draft arms

RULE 114 — *Continued.*

extending beyond body bolster, steel draft members extending full length of car, transom draft gear, steel center sills or steel underframe should be applied and be of such design as will meet the recommended practice of the section for reinforcing existing cars. No allowance shall be made for betterments not authorized by car owner.

NOTE.— See per diem Rule 8.

RULES 115-119, inclusive. Vacant.

DISPOSITION OF CARS REQUIRING EXTENSIVE REPAIRS FOR WHICH OWNERS ARE RESPONSIBLE.

RULE 120. (a) A car requiring general repairs due to owner's defects, on which the estimated labor cost of repairing (including net charge for rivets) exceeds the limit shown in paragraph (b), shall be inspected by the handling line and an inspection certificate made, using form shown on page 175 (except that joint inspection will not be necessary), covering all defects found on car, and estimated cost of repairs, total labor and total material separately, on basis of A. R. A. prices. The inspection certificate shall be forwarded promptly to car owner together with list of material required to be furnished by the owner, per Rule 122, with shipping directions. The car owner shall promptly inspect, if he so desires. If plans or specifications are required they shall

RULE 120 — *Continued.*

also be requested. Safety Appliances, Standard, must be completely applied.

(b) Repair limits for labor:

REFRIGERATOR CARS:

Wooden, with trucks of less than 60,000 lb. capacity	$108.00
Wooden, with trucks of 60,000 lb. capacity and over	180.00
Wooden, with trucks of 60,000 lb. capacity and over, equipped with metal draft arms extending beyond body bolster, continuous metal draft arms, transom draft gear, metal center sills, or steel underframe	270.00

HOUSE AND STOCK CARS:

Wooden, with trucks of less than 60,000 lb. capacity	45.00
Wooden, with trucks of 60,000 lb. capacity and over	108.00
Wooden, with trucks of 60,000 lb. capacity and over, if equipped with metal draft arms extending beyond body bolster, continuous metal draft arms, transom draft gear, metal center sills, or steel underframe	225.00
All steel, or steel superstructure frame with steel underframe	315.00

GONDOLA AND HOPPER CARS:

Wooden, with trucks of less than 60,000 lb. capacity	$ 45.00

RULE 120 — *Continued.*

Wooden, with trucks of 60,000 lb. capacity and over	108.00
Wooden, with trucks of 60,000 lb. capacity and over, if equipped with metal draft arms extending beyond body bolster, continuous metal draft arms, transom draft gear, metal center sills or steel underframe	180.00
All steel, or steel superstructure frame with steel underframe	270.00

FLAT CARS:

Wooden, with trucks of less than 60,000 lb. capacity	45.00
Wooden, with trucks of 60,000 lb. capacity and over	72.00
Wooden, with trucks of 60,000 lb. capacity or over, if equipped with metal draft arms extending beyond body bolster, continuous metal draft arms, transom draft gear, metal center sills, or steel underframe	108.00

(c) The owner shall promptly authorize repairs or destruction of car.

(d) In no case shall the total charge for actual repairs exceed the estimate by more than $50.00 (exclusive of betterments) unless authorized.

(e) If owner authorizes destruction, handling line shall allow credit for all material at

RULE 120 — *Continued.*

A. R. A. scrap prices, less labor cost of destruction.

(f) If car owner authorizes repairs the original plan of construction must be followed and the original kind and quality of materials used, except that metal draft arms extending beyond body bolster, steel draft members extending full length of car, transom draft gear, steel center sills, or steel underframe should be applied and be of such design as will meet the recommended practice of the Section for reinforcing existing cars.

The car owner to determine which of these methods shall be followed, and these instructions should preferably accompany the authority to repair, and be furnished in sufficient detail to enable the repairing line to order all necessary material.

NOTE.— See per diem Rule 8.

RULE 121. Vacant.

FURNISHING MATERIALS.

RULE 122. Companies shall promptly furnish to each other, upon requisition, and forward, freight or express charges collect from point of shipment, materials for repairs of their cars on foreign lines. If the material is for repairs of car owner's defects, the foreign company may bill the car owner for the entire

RULE 120 — *Continued.*

freight charges, and in such case the car owner may reclaim freight charges for that portion of the movement over its own line. If the material is for repairs of user's defects, the foreign line may reclaim only for that portion of the movement over its line. A separate bill, with copy of freight, express or due bill attached, should be rendered for the freight or express charges, showing reference to bill covering repairs.

Requisitions for such material shall specify that same is for repairs of cars, giving car number and initial of such car, together with pattern number, sketch or other data to enable correct filling of requisition.

Material weighing less than 250 lb. gross weight ordered from car owner must be shipped by express.

The company having the car in its possession at the time shall provide from its own stock the following:

Lumber, forgings, hardware stock, paint, hairfelt, piping, air-brake material and all A. R. A. Standard material.

INTERPRETATION. (1) Q.— If material is shipped by local freight to repair owner's defects, who should pay the cartage from the freight depot to the repair tracks?

A.— There should be no charge for cartage.

RULE 122 — *Continued.*

(2) Q.— What items are covered by the word "forgings"?

A.— Commercial shapes, such as channels, Z bars, etc., should be furnished by the repairing line. Pressed steel shapes which require special dies for their forming should not be carried as forgings; such material should be furnished by the car owner.

(3) Q.— When material is shipped on account of owner's responsibility, in order to save considerable correspondence, would it be permissible, in case owner ships the material to another road for repairs to his car, to have material billed prepaid from point of shipment to destination; and when user is responsible for repairs, have the material billed freight charges collect from point of shipment to destination?

A.— There will be no objection to handling in this manner, providing requirements of the Interstate Commerce Commission given in Conference Ruling 333 are followed. It should be understood that proper responsibility must be shown on requisition for material, i. e., whether wanted on account of owner's or user's responsibility.

(4) Q.— Is it proper to add war tax to bills rendered for freight charges on material shipped by owners for repairs to their cars?

A.— Yes.

SETTLEMENT OF DISPUTES.

RULE 123. In order to settle disputes arising under the rules, and to facilitate the revision of the rules at the annual conventions of the Association, an Arbitration Committee of six representative members shall be appointed an-

RULE 123 — *Continued.*

nually by the General Committee; four members of this committee to constitute a quorum.

In case of any dispute or question arising under the rules between the subscribers to said rules, the same may be submitted to this committee, through the Secretary, to receive consideration by the Arbitration Committee.

The abstract should set forth:

1. An agreed statement of facts.
2. Argument of plaintiff.
3. Argument of defendant.

The abstract should consist of not more than three typewritten pages, letter size, single space, the agreed statement of facts to be signed by both parties to the dispute.

Should one of the parties refuse or fail to furnish the necessary information, the committee shall use its judgment as to whether, with the information furnished, it can properly give its opinion. The decisions of the committee shall be final and binding upon the parties concerned. This committee shall report its decisions to the Association, and its report shall be incorporated in the annual report of proceedings of the Association.

REVISION OF THIS CODE OF RULES.

RULE 124. The Arbitration Committee shall ask for suggestions of changes, amendments and additions to these rules prior to each an-

RULE 124 — *Continued.*

nual convention, which it shall consider, and it shall report its recommendations to the succeeding annual convention.

RULE 125. In the revision of these rules by the Section, a two-thirds vote shall be necessary for adoption.

RULE 126. Vacant.

RULE 127. This Code of Rules shall be introduced for discussion and revision at one session of the annual meeting of the Mechanical Section, American Railroad Association, each year.

CONDITIONS OF ACCEPTANCE OF THIS CODE.

RULE 128. Any car owner or railway company may become a party to this Code of Rules by executing the standard form of agreement shown on page 184.

RULE 129. Railroad companies becoming subscribers to this Code of Rules must have a representative member in the Mechanical Section of the American Railroad Association.

RULE 130. Acceptance or rejection of this Code of Rules must be as a whole, and no exception to an individual rule or rules shall be valid.

RULE 131. This Code of Rules shall become effective November 1, 1920.

Send bill and this check card to

AMERICAN RAILROAD ASSOCIATION—AUTHORITY FOR TRANSFER OR ADJUSTMENT OF LADING.

(NAME OF ROAD)

Date.....

Lading.....

Transferred or Lading Adjusted. Account of.....

.....

.....

Issued to..... R. R.....

Car No..... Initial.....

..... Inspector at.....

NOTE.—To be printed in black on white paper in duplicate form, filled out with ink or black indelible pencil. Original to accompany bill and duplicate retained for record.

RETURN CARD.

.....Car No.....
from.....Ry.
to.....Ry.
for the following defects.....
.....
.....
.....
.....
.....

.....
.....19... *Inspector*

3½ by 8 inches.

To be printed in red.

SEE RULE 2.

Send bill on this card to.....

A. R. A. DEFECT CARD.
(*Name of Road.*)

Date.....

Car specified below will be received at any point on this company's line with the following defects:

.....
.....
.....

Car No.....Initials.....

Inspector at.....

NOTE—Fill in defects on both sides with ink or black indelible pencil. Attach this card to car as per Rule 14.

3⅛ by 8 inches.

SEE RULE 5.

.....RAILROAD.

BAD ORDER TRANSFER.

Send to.....R. R. Transfer track and

Send to owner or.....R. R. when empty for repairs

Account of following defects.....

.....

Car No.....Initial.....

Date.... .....19....

Signed .....

Car Inspector.

3½ by 8 inches.

To be printed in green.

SEE RULE 2.

.....RAILROAD.

BAD ORDER.

Return when empty to owner or.....R. R.

For Repairs.....

.....

Car No.....Initial.....

Date.....19...

.....

Per.....

DO NOT RELOAD THIS CAR.

To be printed in black.

THE.....RAILWAY CO.

REPORT OF IMPROPER REPAIRS TO.....CARS.

Station.....*19* ..

Car No.....*Initial*.....*Received from*.....*Ry.* *At*.....*Date*.....*19* ..

Description of wrong Repairs	*How Repairs should be made* .....
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....

Show how Carded on other Side.
We Certify Above to be Correct.

.....*Inspector for* .....*Ry.*

.....*Inspector for* .....*Ry.*

SEE RULE 12.
Size, 3½ by 8 inches.
Other side shown on page 155.

FORM OF JOINT EVIDENCE CARD

THE..... RAILWAY CO.

COPY OF A. R. A. DEFECT CARD. *Issued by*.....*Ry. At*.....*Date*.....*19*...

Inspector.....*Reading as follows*.....

.....

.....

.....

.....

COPY OF A. R. A. BILLING REPAIR CARD. *Issued by*.....*Ry. At*.....*Date*.....*19*...

Inspector.....*Reading as follows*.....

.....

.....

.....

.....

DISPOSITION OF CAR. *Repaired at*.....*Shop; Date*.....*19*...

Other side shown on page 154

.. ..RAILWAY COMPANY.

JOINT INSPECTION CERTIFICATE.

.....19....

The undersigned has personally inspected (Initial) (Kind) Car No..... and find it to be in the following condition:

REPAIRS REQUIRED.	NATURE OF DEFECTS.
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....
Estimated Cost of Repairs.....	.....

Signature..... Inspector for.....

Signature..... Inspector for.....

Size 8 by 10½ inches

Name of Railroad.....

Place.....*19*....

This will authorize the .....*Railroad Company*

to counterbill the.....*Railroad Company*

..... *dollars*

to offset charges in our bill No..... *Amount $*.....

$..... .....

Signature of person issuing.....

This authority must be attached to bill

American Railroad Association Counterbilling Authority.

American Railroad Association Original Record of Repairs

.....COMPANY

Initials.....Kind of car.....Date.....

Car No.....Place.....

End	Repairs Made	Material		Why Made
		Weight	Kind	

Signature ..... Signature.....

Party authorizing repairs. Party making or checking repairs.

NOTE: When couplers or parts, metal brake beams, brake shoes, air hose, journal bearings or wheels and axles are renewed it must be specified whether new or second-hand material is used, as well as other information required by Rule 9. A re-lined journal bearing is considered as new.

AMERICAN RAILROAD ASSOCIATION—BILLING REPAIR CARD

.....Railway Co. (To be attached to Bill.)

END	REPAIRS MADE	Net Price	LABOR Hours		Wrot. Iron	Mall. Iron	Lumber	Springs.	WHY MADE
	Total.....								

DATE.....19.... REPAIRED AT.....INSPECTOR.....

Car No.....INITIAL OR NAME .....KIND.....

3½x8 in. or 7x8 in.
Must not have carbonised back.
SEE RULE 8.

AMERICAN RAILROAD ASSOCIATION—RECORD REPAIR CARD.

(NAME OF RAILROAD) To be retained by party making repairs.

END	REPAIRS MADE	Net Price	LABOR Hours		Wrot. Iron	Mall. Iron	Lumber.	Springs.	WHY MADE

DATE.....19.. REPAIRED AT.....INSPECTOR.....

Car No.....INITIAL OR NAME.....KIND.....

AMERICAN RAILROAD ASSOCIATION—BILLING REPAIR CARD. (Wheels and Axles.)

.....R. R. CO. To be attached to bill.

WHEELS AND AXLE REMOVED						WHEELS AND AXLE APPLIED					
MAKER	Ry. Co.'s Initials on Wheel	Wheel No. Date Cast	SERVICE METAL: Before Turning	SERVICE METAL: After Turning	CAUSE OF REMOVAL	MAKER	Ry. Co.'s Initials on Wheel	Wheel No. Date Cast	Service Metal	New or Second-hand	Net Charge
Axle A. R. A. / Non-A. R. A. ..... Length ..... Condition of						Axle A. R. A. / Non-A. R. A. ..... Length					

Location	Size and Kind of Wheels	Actual Dimension	Journal: Length	Journal: Diam.	Wheel Seat: Diameter	Center: Diameter	Labor	
	Removed							
	Applied	Removed					Total	
		Applied						

DATE ..... 19 .... REPAIRED AT ..... INSPECTOR .....

CAR No. ..... INITIAL OR NAME ..... KIND .....

AMERICAN RAILROAD ASSOCIATION—RECORD REPAIR CARD. (Wheels and Axles.)

.....R. R. CO.

To be retained by party making repairs.

WHEELS AND AXLE REMOVED						WHEELS AND AXLE APPLIED					
MAKER	Fly. Co.'s Initials on Wheel	Wheel No. Date Cast	SERVICE METAL Before Turning	SERVICE METAL After Turning	CAUSE OF REMOVAL	MAKER	Fly. Co.'s Initials on Wheel	Wheel No. Date Cast	Service Metal	New or Second-hand	Net Charge
Axle A. R. A. / Non-A. R. A. ..... Length ..... Condition of						Axle A. R. A. / Non-A. R. A. ..... Length					

Location	Size and Kind of Wheels	Actual Dimension	Journal Length	Journal Diam.	Wheel Seat Diameter	Center Diameter	Labor	
	Removed							
	Applied	Removed					Total	
		Applied						

DATE ..... 19... REPAIRED AT ..... INSPECTOR .....

CAR No. ..... INITIAL OR NAME ..... KIND .....

STATEMENT OF REPAIRS MADE TO ..... CARS, PER A. R. A. INTERCHANGE RULES.

BY.....RAILWAY CO.

During.....19....

Repairs Made		CAR		DESCRIPTION OF PARTS REPAIRED	Value of Miscellaneous Material	LABOR	Wrot. Iron	Mall. Iron	Lumber	Springs	Credit for Scrap
Date	Place	Initials	Number			Hours	Lbs.	Lbs.	Feet	Lbs.	Lbs.
				QUANTITY,							
				PRICE,							
				VALUE,							

NOTE.—Separate columns for tenths of hours is optional.

Total,
Credit for Scrap,
Net Charge,

8½ by 8 in. of 8½ by 14 in.

RULES.

(*Name of Consignor, etc.*)
(*Name of Consignor, etc., in letters not more than one-half inch in any dimension.*)

.....

Initial and No..... Contents.....

Point of Shipment.....R. R.

Consignee and Destination.....

Via.....

Date.....

Vertical dimensions, max. 5 inches.
Horizontal " " 8 "

To be permitted on all loaded cars.

No picture or trade-mark to be permitted.

Space for railroad information to occupy lower three-fifths of card. Printing on upper two-fifths to be limited to letters not exceeding one-half inch in any dimension.

All printing to be in black ink.

SEE RULE 36.

ROUTING CARD.

FORM OF INTERCHANGE AGREEMENT.

The Subscriber hereto adopts and agrees, jointly and severally, with each and all other parties (whether corporations, partnerships or individuals) owning or possessing railroad cars used for the transportation of commodities, which parties have respectively entered into agreements in effect similar to this instrument, that the Subscriber will abide by the Code of Rules governing the condition of, repairs to and settlements for freight cars for the interchange of traffic, as formulated and promulgated by the former Master Car Builders' Association and by the American Railroad Association (Section III — Mechanical), or by either thereof (which rules are designated on the minutes of said Association's proceedings and are commonly known as "Interchange Rules"), and by each of said rules, and as well will abide by each and all decisions and interpretations of the Arbitration Committee provided for by said Code of Rules, until this agreement on the part of the Subscriber shall be terminated by three months' notice in writing, filed with the General Secretary, (or such other officer as from time to time shall be acting as Secretary) of said Railroad Association, or of such body as shall at the time have succeeded thereto.

Dated, signed and sealed this..... day of....., A. D. 19....

.....

By.....
President.

ATTEST:

.....
Secretary.

WITNESSES TO EXECUTION BY SUBSCRIBER:

.....[SEAL]

.....

.....[SEAL]

.....

.....[SEAL]

NOTE.— If Subscriber be a partnership, then following signatures of the respective partners should be added the words "doing business as....." (inserting partnership or trade name).

AMERICAN RAILROAD ASSOCIATION.

Car Service Rule 14.

Unless otherwise agreed, the cost of transferring the lading of freight cars or rearrangement of lading at junction points shall be settled as follows:

FIRST — The delivering road shall pay cost of transfer or rearrangement —

(*a*) When transfer is due to defective equipment that is not safe to run according to A. R. A. Interchange Rules, except where the repairs can be made under load as per Interchange Rule 2.

(*b*) When transfer or rearrangement of load is due to contents being improperly loaded or overloaded, according to A. R. A. Interchange Rules, or the Interstate Commerce Commission Regulations for the Transportation of Explosives and Other Dangerous Articles by Freight and by Express, or when dimensions of the lading of open cars are in excess of the published clearances of any of the roads covered by the routing.

(*c*) When transfer is due to delivering line not desiring its equipment to go beyond junction points.

(*d*) When cars can not pass the approved clearances of The American Railroad Association.

SECOND — The receiving road shall pay cost of transfer or rearrangement —

(*e*) When cars can not pass clearances, except as provided in paragraph (*d*), or when cars and lading exceed load limit or can not be moved through on account of any other disability of receiving line.*

* NOTE TO RULE 14 (*e*).—The word "cars" covers both closed and open cars, but not lading on open cars. The words "load limit" refer to the limits placed on bridges, tracks, etc., and not to car capacity.

(*f*) When receiving road desires transfer to save cost of mileage or per diem.

LIST OF RAILROADS AND CAR OWNERS WHICH HAVE EXECUTED THE INTERCHANGE RULES AGREEMENT

Abilene & Southern Railway Company.
Ahnapee & Western Railway Company.
Akron & Barberton Belt Railroad Company.
Akron, Canton & Youngstown Railway Company.
Alabama & Northwestern Railroad.
Alabama & Vicksburg Railway Company.
Alabama Great Southern Railroad Company.
Alabama, Tennessee & Northern Railroad Corporation.
Algoma Central & Hudson Bay Railway Company.
Algoma Eastern Railway Company.
Alton & Southern Railroad.
American Cotton Oil Company.
American Linseed Company.
American Refrigerator Transit Company Dairy Shippers Despatch.
American Sugar Refining Company.
American Turpentine & Tar Company, Ltd.
Anderson & Gustafson, Inc.
Ann Arbor Railroad.
Arcade & Attica Railroad Corporation.
Arizona & New Mexico Railway Company.
Arkansas Company (formerly Ozarka Company).
Arkansas & Louisiana Midland Railway Company.
Armour & Company.
Arms Palace Horse Car Company.

Asheville & Craggy Mountain Railway Company.
Ashland Coal & Iron Railway Company.
Ashley Drew & Northern Railway.
Associated Oil Company.
Atchison, Topeka & Santa Fe Railway Company.
Atlanta & St. Andrew's Bay Railway.
Atlanta & West Point Railroad.
Georgia Railroad.
Western Railway of Alabama.
Atlanta, Birmingham & Atlantic Railway Company.
Atlantic Port Railway Corporation.
Atlantic & Yadkin Railway Company.
Atlantic Coast Line Railroad Company.
Augusta Railroad Company.
Aurora, Elgin & Chicago Railroad Company.
Backman-Tinsch Circus.
Baltimore & Ohio Railroad Company.
Baltimore & Ohio Chicago Terminal Railroad Company.
Baltimore, Chesapeake & Atlantic Railway Company.
Bamberger Electric Railroad Company.
Bangor & Aroostook Railroad Company.
Batesville Southwestern Railroad.
Beaver Valley Railroad Company.
Bellefonte Central Railroad Company.
Belt Railway Company of Chicago.
Bent, James S.
Berwind-White Coal Mining Company.
Bessemer & Lake Erie Railroad Company.
Bethlehem Mines Corporation.
Big Fork & International Falls Railway Company.
Birmingham & Northwestern Railway Company.
Birmingham Belt Railroad Company.
Blue Ridge Railway Company.
Boston & Albany Railroad.

Boston & Maine Railroad.
Barre & Chelsea Railroad.
Montpelier & Wells River Railroad.
St. Johnsbury & Lake Champlain Railroad.
Sullivan County Railroad.
Vermont Valley Railroad.
York Harbor & Beach Railroad.
Boyne City, Gaylord & Alpena Railroad Company.
British Columbia Electric Railway Company, Ltd.
Brownwood, North & South Railway Company.
Buffalo & Susquehanna Railroad Corporation.
Buffalo, Rochester & Pittsburgh Railway Company.
Buick Motor Company.
Bullfrog Goldfield Railroad Company.
Butte, Anaconda & Pacific Railway Co.
Cadillac Motor Car Company.
California Dispatch Company.
California Western Railroad & Navigation Company.
Cambria & Indiana Railroad Company.
Campbells Creek Railroad Company.
Canadian Pacific Railway Company.
Canton Railroad Company.
Carolina & Northwestern Railway Co.
Carolina & Tennessee Southern Railway Company.
Carolina, Clinchfield & Ohio Railway.
Carrollton & Worthville Railroad.
Central California Traction Company.
Central Indiana Railway Company.
Central New England Railway Company.
Central of Georgia Railway Company.
Central Railroad Company of New Jersey, The.
Central Vermont Railway Company.
Charles City Western Railway Company.

Charlotte Harbor & Northern Railway Company.
Chattahoochee Valley Railway Company.
Chesapeake & Ohio Railway Company.
Chesapeake & Ohio Railway Company of Indiana.
Chesapeake Western Railway.
Chesterfield & Lancaster Railroad Company.
Chestnut Ridge Railway Company.
Chevrolet Motor Company of Michigan.
Chicago & Calumet River Railroad.
Chicago & Eastern Illinois Railroad.
Chicago & Illinois Western Railroad.
Chicago & North Western Railway Company.
Chicago & Western Indiana Railroad Company.
Chicago, Burlington & Quincy Railroad Company.
Chicago Great Western Railroad Company.
Chicago, Indianapolis & Louisville Railway Company.
Chicago Junction Railway Company.
Chicago, Lake Shore & South Bend Railway Company.
Chicago, Milwaukee & St. Paul Railway Company.
Chicago, New York & Boston Refrigerator Company.
Chicago, North Shore & Milwaukee Railroad.
Chicago, Peoria & St. Louis Railroad.
Chicago River & Indiana Railway Company.
Chicago, Rock Island & Pacific Railway Company.
Chicago, Rock Island & Gulf Railway Company.
Chicago, St. Paul, Minneapolis & Omaha Railway Company.

Chicago Short Line Railway Company.
Chicago, Terre Haute & Southeastern Railway Company.
Cincinnati, Indianapolis & Western Railroad Company.
Cincinnati, Lebanon & Northern Railway Company.
Cincinnati, New Orleans & Texas Pacific Railway Company.
Cincinnati Northern Railroad Company.
Cleveland, Cincinnati, Chicago & St. Louis Railway Company.
Clinton & Oklahoma Western Railroad Company.
Clinton, Davenport & Muscatine Railway Company.
Colorado & Southern Railway Company.
Colorado & Wyoming Railway Company.
Colorado Midland Railroad Company.
Colorado Springs & Cripple Creek District Railway Company.
Conley Car Company.
Coopers Creek Chemical Company.
Copper Range Railroad Company.
Cornwall Railroad Company.
Craig Oil Company.
Cumberland & Pennsylvania Railroad Company.
Cumberland Valley & Martinsburg Railroad Company.
Danville & Western Railway Company.
Dardanelle & Russellville Railroad Company.
Davenport, Rock Island & Northwestern Railway Company.
Dayton-Goose Creek Railway Company.
Dayton & Union Railroad Company.
Delaware & Hudson Company, The.
Delaware & Northern Railroad Company.
Delaware, Lackawanna & Western Railroad Company.

Delaware River & Union Railroad Company.
Delray Connecting Railroad Company.
Delray Despatch Line, Inc.
Denison & Pacific Suburban Railway Company.
Denver & Rio Grande Railroad Company.
Denver & Salt Lake Railroad Company.
DeQueen & Eastern Railroad Company.
Des Moines Union Railway Company.
Des Moines Western Railway Company.
Detroit & Mackinac Railroad.
Detroit Terminal Railroad Company.
Detroit, Toledo & Ironton Railroad Company.
Dewey Portland Cement Company.
Diamond Alkali Company.
Duluth & Iron Range Railroad Company.
Duluth, Missabe & Northern Railway Company.
Duluth, South Shore & Atlantic Railroad Company.
Durham & South Carolina Railroad Company.
East Carolina Railway.
East Jersey Railroad & Terminal Company.
East Jordan & Southern Railroad Company.
East St. Louis & Suburban Railway Company.
East Tennessee & Western North Carolina Railroad Company.
Electric Short Line Railway Company.
Elgin, Joliet & Eastern Railway.
Elkhorn Piney Coal Mining Company.
El Paso & Southwestern Company.
Emory Manufacturing Company.
Erie & Michigan Railway & Navigation Company.

Erie Railroad Company.
Bath & Hammondsport Railroad Company.
Chicago & Erie Railroad Company.
New Jersey & New York Railroad Company.
New York, Susquehanna & Western Railroad Company.
Esquimalt & Nanaimo Railway Co.
Essex Terminal Railway.
Evans Greater Shows, Ed. A.
Evansville & Ohio Valley Railway Company.
Everett Pulp & Paper Company.
Fairport, Painesville & Eastern Railroad Company.
Fernwood & Gulf Railroad Company.
Florida East Coast Railway Company.
Fort Dodge, Des Moines & Southern Railroad.
Fort Smith & Western Railroad.
Fort Worth & Denver City Railway Company.
Fort Worth & Rio Grande Railway Company.
Francis Ferari Shows, Col.
Frankfort & Cincinnati Railway Company.
Franklin & Pittsylvania Railroad Company.
Fredericksburg & Northern Railway Company.
Gainesville Midland Railway.
Galveston, Houston & Henderson Railroad Company.
Garyville Northern Railroad Company.
General American Tank Car Corporation.
General Chemical Company (Crescent Tank Line).
Georgia & Florida Railway.
Georgia, Florida & Alabama Railway Company.

Georgia, Southern & Florida Railway Company.
Gilmore & Pittsburgh Railroad Company, Ltd.
Globe Soap Company.
Goodwin Car & Manufacturing Company.
Gould Southwestern Railway.
Grafton & Upton Railroad Company.
Grand Canyon Railway Company.
Grand Rapids & Indiana Railway Company.
Grand Trunk Pacific Railway Company.
Grand Trunk Railway Company of Canada.
Graver Corporation.
Great Northern Railway Company.
Great Patterson Shows, The.
Great Western Railway Company.
Green Bay & Western Railroad Company.
Greenwich & Johnsonville Railway Company.
Groveton, Lufkin & Northern Railway.
Gulf & Sabine River Railroad Company.
Gulf & Ship Island Railroad Company.
Gulf Coast Lines.
  Beaumont, Sour Lake & Western Railroad.
  New Iberia & Northern Railroad.
  New Orleans, Texas & Mexico Railroad.
  Orange & Northwestern Railroad.
  St. Louis, Brownsville & Mexico Railroad.
Gulf, Colorado & Santa Fe Railroad Company.
Gulf, Mobile & Northern Railroad Company.
Gulf Refining Company.
Hagenbeck-Wallace Shows Company.
Harriman & Northeastern Railroad Company.

Hartwell Railway Company.
Hawkinsville & Florida Southern Railway Company.
High Point, Randleman, Asheboro & Southern Railway Company.
Hillman Coal & Coke Co. (formerly United Coal Co.).
Hocking Valley Railway Company.
Howes Great London Shows Company.
Huntington & Broad Top Mountain Railroad & Coal Company.
Illinois Central Railroad Company.
Illinois Southern Railway Company.
Illinois Traction System.
- Bloomington, Decatur & Champaign Railroad.
- Danville, Urbana & Champaign Railroad.
- Illinois Central Traction Company.
- St. Louis Electric Terminal Railway Company.
- St. Louis, Springfield & Peoria Railroad.

Imperial Oil Company, Ltd.
Indiana Harbor Belt Railroad.
Indianapolis Union Railway Company.
Inland Empire Railroad Company.
Inter-National Agricultural Corporation.
International & Great Northern Railway Company.
Interstate Railroad Company.
Inter-Urban Railway.
Ironton Railroad Company.
Jackson & Eastern Railway Company.
Jacob Dold Packing Company.
Johnstown & Stony Creek Railroad Company.
Jonesboro, Lake City & Eastern Railroad Company.
Kalamazoo, Lake Shore & Chicago Railway Company.
Kanawha, Glen Jean & Eastern Railroad Company.

Kanawha & Michigan Railway.
Kanawha & West Virginia Railroad Company.
Kansas City, Clinton & Springfield Railway Company.
Kansas City, Kaw Valley & Western Railway Company.
Kansas City, Mexico & Orient Railroad Company.
Kansas City Southern Railway Company.
Kansas City Terminal Railway Company.
Kansas, Oklahoma & Gulf Railway Company.
Keith Railway Equipment Company.
Kentucky & Indiana Terminal Railroad Company.
Kentwood & Eastern Railway Company.
Kewaunee, Green Bay & Western Railroad Company.
Kosciusko & Southeastern Railroad Company.
Lackawanna Steel Company.
Lackawanna & Wyoming Valley Railroad Company.
Lake Champlain and Moriah Railroad Company.
Lake Erie & Eastern Railroad Company.
Lake Erie & Western Railroad Company.
Lake Erie, Franklin & Clarion Railroad.
Lake Superior & Ishpeming Railway Company.
Lake Superior Terminal & Transfer Railway Company.
Lake Terminal Railroad Company, The.
LaSalle & Bureau County Railroad Company.
Leavenworth & Topeka Railroad Company.
Leetonia Railway Company.

Lehigh & Hudson River Railway Company.
Lehigh & New England Railroad Company.
Lehigh Valley Railroad Company.
Lincoln Gas Coal Company.
Linde Air Products Company.
Litchfield & Madison Railway Company.
Little River Railroad Company.
Live Oak, Perry & Gulf Railway Company.
Live Poultry Transit Company.
Long Fork Railway Company.
Long Island Railroad Company.
Lorain, Ashland & Southern Railroad Company.
Louisiana & Arkansas Railway Company.
Louisiana & North West Railroad.
Louisiana & Pacific Railway Company.
Louisiana Railway & Navigation Company.
Louisville & Nashville Railroad Company.
Louisville & Wadley Railroad Company.
Louisville Bridge & Terminal Railway Company.
Louisville Food Products Company.
Louisville, Henderson & St. Louis Railway Company.
Macon, Dublin & Savannah Railroad Company.
Macon & Birmingham Railway Company.
Maine Central Railroad Company.
Portland Terminal Company.
Manistee & Northeastern Railroad Company.
Manistique & Lake Superior Railroad Company.
Manufacturers' Junction Railway Company.
Manufacturers' Railway Company.

Marianna & Blountstown Railroad Company.
Maryland & Pennsylvania Railroad Company.
Maryland, Delaware & Virginia Railway Company.
Mathieson Alkali Works, Inc.
Meridian & Memphis Railway Company.
Mexican Petroleum Corporation.
Michigan Central Railroad Company.
Michigan Railroad Company.
Middletown & Unionville Railroad Company.
Midland Valley Railroad Company.
Mineral Point Zinc Company.
Minneapolis & St. Louis Railroad Company.
Minneapolis, Red Lake & Manitoba Railway Company.
Minneapolis, St. Paul & Sault Ste. Marie Railway Company.
Minnesota, Dakota & Western Railway Company.
Minnesota & International Railway Company.
Mississippi Central Railroad Company.
Mississippi River & Bonne Terre Railway.
Missouri, Kansas & Texas Lines.
Missouri-Pacific Railroad Company.
Missouri Portland Cement Company.
Mobile & Ohio Railroad Company.
Monongahela Railway Company.
Monongahela Valley Traction Company.
Montana, Wyoming & Southern Railroad Company.
Montour Railroad Company.
Morgantown & Kingwood Railroad Company.
Morris & Company.
Morrissey, Fernie & Michel Railway Company.

Munising, Marquette & Southeastern Railway Company.
Muscatine, Burlington & Southern Railroad Company.
Nacozari Railroad Company.
Nashville, Chattanooga & St. Louis Railway.
Natchez, Columbia & Mobile Railroad Company.
National Ammonia Company.
Nevada Copper Belt Railroad Company.
Nevada Northern Railway Company.
New England Fuel & Transportation Company.
New Jersey, Indiana & Illinois Railroad Company.
New Mexico Central Railway Company.
New Orleans & Northeastern Railroad Company.
New Orleans Great Northern Railroad Company.
New Orleans, Natalbany and Natchez Railway Company.
New River & Pocahontas Consolidated Coal Company.
New York & Pennsylvania Railway Company.
New York Central Railroad Company.
New York, Chicago & St. Louis Railroad Company.
New York, New Haven & Hartford Railroad Company.
New York, Ontario & Western Railway Company.
New York, Philadelphia & Norfolk Railroad Company.
Nichols Chemical Co., Ltd. (Sherbrooke Tank Line, Ltd.).
Noble Oil & Gas Company, Chas. F.
Norfolk & Western Railway Company.
Norfolk Southern Railroad Company.
North American Car Company.

Northern Alabama Railway Company.
Northern Pacific Railway Company.
Northwestern Ohio Railway & Power Company.
Northwestern Pacific Railroad Company.
Oakland, Antioch & Eastern Railway.
Oakland Motor Car Company.
Ocilla Southern Railroad Company.
Ohio Electric Railway Company.
Ohio River & Western Railway Company.
Oil Seeds Company.
Oneida & Western Railroad Company.
Oregon Electric Railway Company.
Oregon Short Line Railroad Company
Oregon Trunk Railway.
Oregon-Washington Railroad & Navigation Company.
Overland Beverage Company.
P. & F. Tank Line, Inc.
Pacific & Illinois Railroad Company.
Pacific Coast Railroad Company.
Pacific Electric Railway.
Pacific Fruit Express Company.
Pacific Great Eastern Railway Company.
Paducah & Illinois Railroad Company.
Panhanndle & Santa Fe Railway Company.
Paragon Refining Company.
Paris & Mt. Pleasant Railroad Company.
Parral & Durango Railroad Company.
Pence Automobile Company.
Pennsylvania Railroad Company.
Philadelphia, Baltimore & Washington Railroad Company.
Pennsylvania Railroad Company, Western Lines.
Pennsylvania Tank Line.
Peoria & Pekin Union Railway Company.
Pere Marquette Railway Company.
Pickens Railroad Company.

Pierce Oil Corporation.
Pittsburgh & Lake Erie Railroad Company.
Pittsburgh & Ohio Valley Railway Company.
Pittsburg & Shawmut Railroad Company.
Pittsburgh, Allegheny & McKees Rocks Railroad Company.
Pittsburgh, Chartiers & Youghiogheny Railway Company.
Pittsburgh, Cincinnati, Chicago & St. Louis Railway Company.
Pittsburgh, Lisbon & Western Railroad Company.
Pittsburgh Provision & Packing Company.
Portland Railway, Light & Power Company.
Potato Creek Railroad.
Puget Sound & Cascade Railway Company.
Pullman Railroad Company.
Quebec Central Railway Company.
Quebec, Montreal & Southern Railway Company.
Raleigh & Charleston Railroad Company.
Rapid City, Black Hills & Western Railroad Company.
Raritan River Railroad Company.
Rice-Dorman Shows, Inc.
Richmond, Fredericksburg & Potomac Railroad Company.
Ringling Bros. & Barnum-Bailey Combined Shows.
Ringling, Eastland & Gulf Railway Company.
Rio Grande, El Paso & Santa Fe Railroad Company.
River Terminal Railway Company.
Robinson's Circus, John.
Rock Island Southern Railway Company.
Rome & Northern Railroad Company.
Roscoe, Snyder & Pacific Railway Company.

Rutland Railroad Company.
St. Joseph & Grand Island Railway Company.
St. Louis & Belleville Electric Railway Company.
St. Louis & Hannibal Railroad Company.
St. Louis & O'Fallon Railway Company.
St. Louis Merchants' Bridge Terminal Railway Company.
St. Louis Refrigerator Car Company.
St. Louis-San Francisco Railway Company.
St. Louis Southwestern Railway Company.
St. Louis Southwestern Railway Company of Texas.
St. Paul Bridge & Terminal Railway Company.
Sacramento Northern Railroad.
Salt Lake & Utah Railroad Company.
San Antonio & Aransas Pass Railway Company.
San Antonio, Uvalde & Gulf Railroad Company.
San Benito & Rio Grande Valley Railway Company.
Sandy Valley & Elkhorn Railway Company.
San Francisco-Oakland Terminal Railways.
Savannah & Atlanta Railway.
Schoharie Valley Railway Company.
Seaboard Air Line Railway Company.
Shaffer Oil & Refining Company.
Sharpsville Railroad Company.
Sierra Railway Company of California.
Sinclair & Company, Ltd., T. M.
Skinner Company, The.
Solvay Process Company, The.
South Buffalo Railway Company.
Southern Oil Corporation.
Southern Railway Company.
Southern Railway Company in Mississippi.

Southern Pacific Company.
Arizona Eastern Railroad.
Galveston, Harrisburg & San Antonio Railway.
Houston & Shreveport Railroad Company.
Houston & Texas Central Railroad Company.
Iberia & Vermilion Railroad Company.
Lake Charles & Northern Railroad Company.
Louisiana Western Railroad Company.
Morgans' Louisiana & Texas Railroad and Steamship Company.
Southern Pacific Lines in Texas & Louisiana.
Southern Pacific Railroad of Mexico.
Southern Pacific Terminal Company.
Texas & New Orleans Railroad Company.
The Houston East & West Texas Railway Company.
South Georgia Railway Company.
Spokane & Eastern Railway & Power Company.
Spokane International Railway Company.
Spokane, Portland & Seattle Railway Company.
Standard Tank Car Company.
Staten Island Rapid Transit Railway Company.
Sterling Coal Company.
Stewart Farm Mortgage Company.
Sugar Land Railroad Company.
Susquehanna & New York Railroad Co.
Swift Refrigerator Transportation Co.
Sylvania Central Railway Company.
Tallulah Falls Railway Company.
Tampa & Gulf Coast Railroad Company.
Tampa Northern Railroad Company.
Temiscouta Railway.
Temiskaming & Northern Ontario Railway.
Temtor Corn & Fruit Products Company.

Tennessee, Alabama & Georgia Railroad Company.
Tennessee Central Railroad Company.
Tennessee Copper Company.
Terminal Railroad Association of St. Louis.
Texarkana & Fort Smith Railway Company.
Texas & Pacific Railway Company.
Texas Company, The
Texas, Oklahoma & Eastern Railroad Company.
Texas Southeastern Railroad Company.
Tionesta Valley Railway Company.
Toledo & Ohio Central Railway Company.
Toledo & Western Railroad Company.
Toledo, Peoria & Western Railway.
Tonopah & Goldfield Railroad Company.
Tonopah & Tidewater Railroad Company.
Tooele Valley Railroad Company.
Toronto, Hamilton & Buffalo Railway Company.
Tremont & Gulf Railway Company.
Trinity & Brazos Valley Railway Company.
Tucker & Son Company, W. H.
Ulster & Delaware Railroad Company.
Uncle Sam Oil Company.
Union Oil Company of California.
Union Pacific Railroad Company.
Union Railroad Company.
Union Railway Company.
Union Refrigerator Transit Company.
Union Tank Car Company.
Union Transportation Company.
United Railways Company.
Utah-Idaho Central Railroad Company.
Vicksburg, Shreveport & Pacific Railway Company.
Virginia & Truckee Company.
Virginia Blue Ridge Railway.
Virginian Railway Company.
Wabash, Chester & Western Railroad.
Wabash Railway Company.

Wadley Southern Railway Company.
Warren Oil Company of Pennsylvania.
Washington & Old Dominion Railway.
Waterloo, Cedar Falls & Northern Railway Company.
Waycross & Southern Railroad Company.
Waynesburg & Washington Railroad Company.
Weatherford, Mineral Wells & Northwestern Railway Company.
Western Allegheny Railroad.
Western Maryland Railway Company.
Western New York & Pennsylvania Railway Company.
Western Pacific Railroad Company.
Western Union Telegraph Company.
West Jersey & Seashore Railroad Company.
Westmoreland Coal Company.
Wheeling & Lake Erie Railway Company.
Wheeling Terminal Railway Company.
White Oil Corporation.
Wichita Valley Railroad Company.
Wiggins Ferry Company.
East St. Louis Connecting Railway Company.
St. Louis Transfer Railway Company.
Wilkes Barre & Eastern Railroad Company.
Wilmington, Brunswick & Southern Railroad Company.
Wilson Car Lines.
Windsor, Essex & Lake Shore Rapid Railway.
Winston-Salem Southbound Railway Company.
Wisconsin & Michigan Railroad Company.
World-at-Home-Shows.
Polack Brothers' Twenty Big Shows.
Wrightsville & Tennille Railroad Company.
Yadkin Railroad Company.
Yazoo & Mississippi Valley Railroad Company.
Zanesville & Western Railway Company.

APPENDIX.

CODE OF RULES
Governing the Condition of, and Repairs to, Passenger Equipment Cars in Interchange.

PREFACE.

These rules make car owners responsible for, and therefore chargeable with, repairs to their cars, except as otherwise provided.

All inspection of passenger equipment cars for interchange will be made in accordance with the following rules:

RULE 1. Each Railway Company shall give to foreign cars, while on its line, THE SAME CARE AS TO INSPECTION, OILING, PACKING AND THE ADJUSTMENT OF BRAKES THAT IT GIVES TO ITS OWN CARS, except in case of cars on which work is done under special agreement existing between the company owning the cars and the road operating same.

RULE 2. Cars, loaded or empty, offered in interchange with defects for which owner is responsible, provided they otherwise meet the requirements of the receiving line as to safety and clearances, must be accepted, with the following exception:

RULE 2 — *Continued.*

(a) Cars, loaded or empty, having defects in violation of the Safety Appliance Acts, should not be offered in interchange.

(b) Cars, loaded or empty, using lighting outfits operated by gasoline engines, will not be accepted in interchange.

RULE 3. Passenger equipment cars operating in interchange shall be divided into two classes of service as follows:

(a) Line Service: Cars operating in a regular course over two or more systems of railroads and under an approved operating agreement.

(b) "Interchange Service: Cars moving over two or more systems of railroads and the operation of which does not comply with the requirements of Line Service."

(c) The expense of terminal heating, cleaning, lubricating, icing or watering cars (including water barrels), on trains to be used for the movement of troops shall be assumed by the road incurring such expense. Item of gas shall be handled in accordance with Rule 17.

RULE 4. If a car is offered with defects for which owner is not responsible, the delivering line must promptly furnish a defect card covering such defects, the defect card to be of form shown in freight code of rules.

RULE 5. Improper repairs to passenger equipment cars shall be handled same as outlined in freight code of rules.

RULE 6. The expenses of passenger equipment cars operated in interchange or line service shall be divided into four classes, namely:

(a) Owner's defects.

(b) Delivering company's defects.

(c) Line service expense; proratable on a mileage basis against the roads comprising the line.

(d) Electric lighting.

RULE 7. Owner's defects are as follows:

(a) Damage or loss to any car except as otherwise provided.

(b) Cracked or broken glass.

(c) Chimneys, wicks, burners, shades, and all other fittings of oil-lighting equipment when car is not in Line Service.

Mantles, tips, burners, domes, globes, bulbs, bowls and all other fittings of gas-lighting equipment when car is not in Line Service.

Fuses, incandescent bulbs, shades, belts, current, wiring, and all other parts of electric-lighting equipment. (See Rule 10.)

Gas shall be handled in accordance with Rule 17.

(d) All defective or missing inside or concealed parts of car, including tools and emergency repair parts missing from either inside or outside of all cars.

(e) Axle broken or having journal ½ in. or more under the standard diameter for car (except for 3¼ by 7 in. journal, which will be condemned at 3½ in.) or having seamy journal, fillet in back shoulder worn out, length of journal increased ½ in. or more over stan-

RULE 7 — *Continued.*

ard length for the car, or collar broken off or worn to ¼ in. or less under fair usage. Size of journal should be stenciled on truck. Axles standard to car must be maintained. When secondhand axles are applied, the diameter of the journals must be at least ⅛ in. greater than the limiting dimensions shown above. The length of journals must not exceed ⅜ in. over standard length, the collar must not be less than 5-16 in. thick, and the fillet at back end of journals must be good.

When axle is removed on account of owner's defect on wheel, if diameter of journal is not at least ⅛ in. greater than limiting diameter shown above, or if journal is more than ⅜ in. longer than standard length, or collar is less than $\frac{1}{16}$ in. thick, the axle shall be considered as scrap, and so credited.

(f) Cast-iron, cast-steel, wrought-steel and steel-tired wheels with following defects:

(1) Loose. All wheels.

(2) Variation from gage (see Fig. 8 in freight code for wheels cast prior to A. R. A. standard tread and flange adopted in 1907, and Fig. 9 for wheels cast after January 1, 1908. Fig. 9 also applies for all cast-steel, wrought-steel and steel-tired wheels.)

(3) Shelled out: Wheels with defective treads on account of pieces shelling out; if the spots are over 1 in., or so numerous as to endanger the safety of the wheel. Brake burn:

Wheels having defective treads on account of cracks or shelling out due to heating. All wheels.

(4) Tread worn hollow: If tread is worn hollow ⅛ in. or over. Cast-iron wheels.

(5) Worn flange: Flanges having flat vertical surfaces extending ⅞ in. or more from tread, or flanges 1 in. thick or less, gaged at a point ⅜ in. above tread. Cast-iron and cast-steel wheels.

Gage for condemning worn flanges of cast-iron and cast-steel wheels under passenger cars should be the same as is used for condemning worn flanges of cast-iron and cast-steel wheels under freight cars of 80,000 lb. capacity or over. (See Figs. 3 and 4 of freight code.)

(6) Worn flange or tire: With flange 1⅛ in. thick or less, or having flat vertical surface extending 1 in. or more from tread, or with tire thinner than shown in Figs. 1, 2, 3 and 4 of passenger code. Wrought-steel and steel-tired wheels.

Gage for condemning worn flanges of wrought-steel and steel-tired wheels under passenger cars to be the same as is used for condemning worn flanges of wrought-steel and steel-tired wheels under freight cars, see Figs. 3 and 4 of Freight Code.

(7) Burst: If wheel is cracked from wheel fit outward by pressure from axle. All wheels.

RULE 7—*Continued.*

FIG 1
STEEL TIRE
RETAINING RING FASTENING

RULE 7 — *Continued.*

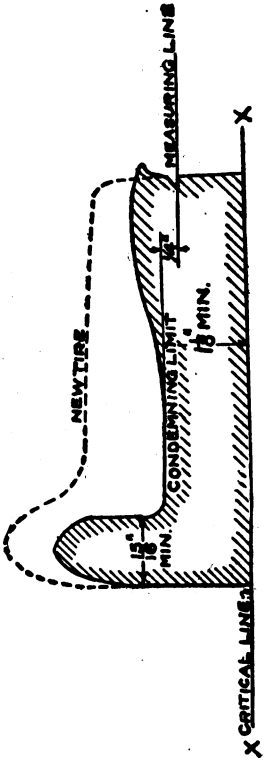


FIG. 2.
STEEL TIRE
SHRINKAGE FASTENING ONLY

RULE 7 — *Continued.*

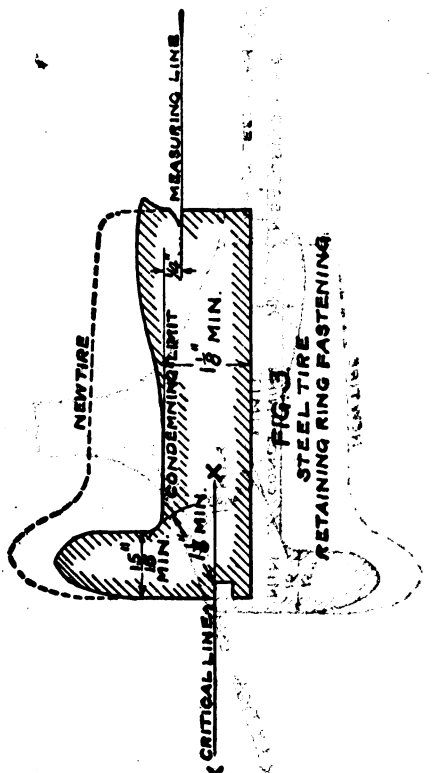


FIG. 3
STEEL TIRE
RETAINING RING FASTENING

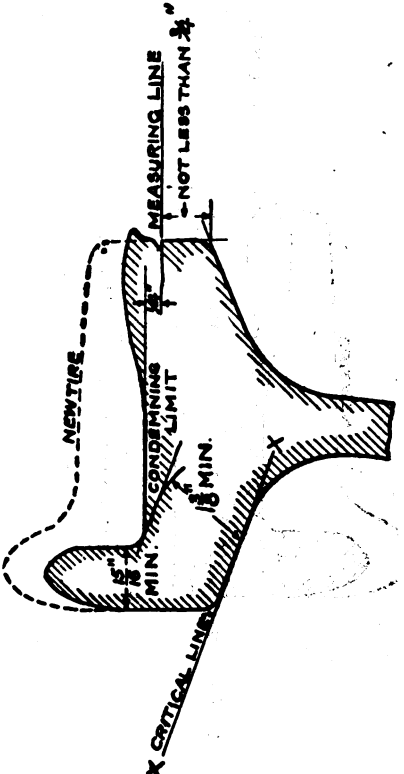


FIG. 4.
STEEL WHEEL.
MINIMUM DIMENSIONS FOR WROUGHT STEEL AND STEEL TIRED WHEELS.

RULE 7 — *Continued.*

(8) Flange, rim, tread, plate brackets or any other part of wheel, either cracked, chipped, seamy or broken under fair usage. All wheels.

(9) Broken or cracked hubs, plates, bolts, retaining ring or tire, occurring under fair usage. Steel-tired wheels.

(10) Worn through chill: When the worn spot is one (1) in. or over in length. Care must be taken to distinguish this defect from flat spots caused by sliding wheels. Cast-iron wheels.

(11) Thick flange: Flange over 1 19/64 in. thick for cast-iron wheels having increased flange and tread standards of 1907 and 1909, and for all cast-steel, wrought-steel and steel-tired wheels. See Fig. 7 of Freight Code.

(12) Wrought-steel wheels may be substituted for cast-steel or steel-tired wheels.

(g) Any company finding cars not within the limits of standard height for couplers must make repairs. As far as possible, cars should be adjusted when empty.

(h) Couplers that exceed the distance of 5⅛ in. between point of knuckle and guard arm, measured perpendicularly to guard arm, must have the defective part or parts renewed, to bring coupler within gage.

INTERPRETATION. Q.— Who is responsible for vestibule curtains torn or missing?

A.— It should be considered as an inside part of a car and the owner is responsible.

RULE 8. Delivering line defects are as follows:

(a) Removing or cutting out parts of car to facilitate loading or unloading.

Known theft of parts of car occurring on handling line.

Damage to any car (including cars on ferries or floats) if caused by:

(1) Derailment.

(2) Cornering.

(3) Sideswiping.

(4) Collision or impact other than that occurring in regular switching. (See Freight Car Rule 32.)

(5) Handling of cars with broken or missing couplers, or couplers out of place.

(6) Colliding with or shoving over bumping post or other fixed obstruction.

(7) Shifting of loads from other cars.

(8) Overloading.

(9) Explosion.

(10) Collapsing buildings or other structures on right-of-way.

(11) Unconcealed fire damage.

(12) Flood.

(13) Storm where car is derailed or destroyed.

(b) Slid-flat wheels: If flat spots caused by sliding exceed 1 in. in length. All wheels. The same responsibility shall apply to the mate wheel, regardless of length of slid spot. A separate defect card shall be furnished in the case of wrought-steel or steel-tired wheels.

(c) Cast-iron wheels in place of cast-steel,

RULE 8 — *Continued.*

wrought-steel or steel-tired wheels, and cast-steel wheels in place of wrought-steel or steel-tired wheels.

(d) Private line cars having trucks equipped with steel-tired or wrought-steel wheels for movement in passenger trains, and trucks so stenciled, if found with cast-iron or cast-steel wheels.

(e) Cut journals, axles bent or axles damaged as provided paragraph (a). When necessary to true up axles in cases of cut journals, if the journal is reduced below the limit as prescribed in Rule 7 (e), axle must be changed at the expense of the delivering line.

(f) Loss of service metal from wrought-steel or steel-tired wheels, caused by flat sliding, is chargeable to the company on whose road the damage occurs.

The above provisions shall govern any loss or increase of service metal on account of the mate wheel, even if same is not defective, if both wheels are turned off to correspond.

NOTE.— For loss of service metal on slid-flat wheels, ⅛ in. will be allowed for flat spots 2½ in. long or less, and 1-16 in. for each additional inch or fraction thereof.

Any additional loss of service metal that it is necessary to remove on account of worn flange or tread must be borne by the car owner.

(g) Missing brake cylinders, reservoirs, triple valves, control valves, pressure retaining valves, cut-out cocks, angle cocks, air hose,

RULE 8 — *Continued.*

steam hose, end steam valves, signal hose, and any portion of steam train line missing with end steam valves.

(h) Burst or broken steam pipes and fittings, damaged steam valves, traps and parts of same (inside of car), when due to freezing, on cars equipped with a combined steam heat cut-out and drain valve, also on cars equipped with hot water system of heating, except when accompanied by porter furnished by car owner, who fails to bring to the attention of the handling line conditions that would cause any of the parts above mentioned to freeze.

INTERPRETATION. Q.— What is known theft of parts of car occurring on handling line intended to cover?

A.— Where the handling line knows beyond doubt that the items were stolen while car was in its possession, the car owner can not be held responsible, and missing material should be classed as a delivering line defect.

RULE 9. Line Service expense items are as follows:

(a) Terminal cleaning. (See note below.)

(b) Heating. (Terminal heating, and coal furnished for individual heaters for heating en route.) See note on next page.

(c) Chimnies, wicks, burners, shades and all other fittings of oil lighting equipment. Mantles, tips, burners, domes, globes, bulbs, bowls and all other fittings of gas lighting equipment.

(d) Lubrication, labor and material.

RULE 9 — *Continued.*

(e) Illuminating oils, water and ice are not a line expense. Coal, wood and charcoal are not a line expense unless used as specified in paragraph "B" for cars in line service. (See note below.)

NOTE.— The following items not being car owner's responsibility nor cardable in interchange, should be assumed by the handling line when the car is not operating in Line Service:

(1) Ordinary daily cleaning, sweeping and dusting interior, wiping down or washing exterior, cleaning windows, etc. (If this service is performed on private or business cars, the cost shall be charged against the car owner.)

(2) Oil furnished oil-lighted cars in any service.

(3) Terminal heating. (The cost of heat furnished to private or business cars shall be charged against the car owner.)

(4) Coal, wood, charcoal, water and ice. (Such items furnished private or business cars shall be charged against car owner.)

RULE 10. Electric lighting:

(a) A charge of 5 mills per car-mile (with a minimum mileage of 100 miles for any calendar day) shall be made by the road owning the car against the road handling the car for the electric-lighting equipment on cars equipped either for axle generator or straight storage-battery service.

RULE 10—*Continued.*

(b) This charge of 5 mills is to cover the expenses of operation, maintenance, depreciation and interest on the electrical equipment; therefore, all expenses incident to the operation and maintenance of such special features (except inspection, lubrication and distilled water for batteries) shall be charges against the car owner, unless due to unfair usage.

(c) The electrical equipment referred to consists of the following:

Axle-generator car:

Battery complete in trays.
Axle generator complete.
Axle generator suspension.
Axle generator regulator.
Lamp regulator.
Axle pulley.
Belt and fasteners.

Straight storage car:

Battery complete in trays.

Either axle-generator or straight storage car:

Fuses, incandescent bulbs, reflectors, current, charging plug receptacles, conduit, wiring, switchboard and battery box.

(d) On electrical head-end lighting system of passenger-equipment trains a charge of 50 cents shall be made for the electrical equipment for each 100 miles train is run. This charge does not include the cost of coal and attendant.

This charge is intended to cover the expenses of operation (excluding attendant and coal), maintenance, depreciation and interest

RULE 10 — *Continued.*

on the following, which comprise head-end electrical equipment:

Head-end car:

Generator set complete, including all regulating and control equipment and instruments.

Dynamo hose.

Chain drive, including sprockets.

Train-line connectors and receptacles.

Fuses, bulbs, wiring, etc.

NOTE.— In case a car fully equipped for straight storage lighting is included in a train lighted with head-end system, a charge of 5 mills per car-mile (with a minimum mileage of 100 miles for any calendar day) shall be made for each car so equipped.

If an attendant be furnished, such proportion of his wages and expenses as is properly chargeable to electric car lighting shall be prorated among the roads in interest on a mileage basis.

(e) For repairs to electric lighting equipment on cars in interchange or leased cars, the instructions issued by the manufacturer of the apparatus shall be strictly followed. In the absence of any agreement, the material furnished and applied must be of the same manufacturer's make and quality as that which it replaces.

(f) This rule applies irrespective of the kind of service in which the car is operating, unless there is a special agreement covering these items of expense.

RULE 10 — *Continued.*

INTERPRETATION. (Section A.) Q.— Is this rule applicable in cases where electric lights are not burned, and also when no mileage is made?

A.— This rule applies in all cases and each calendar day (that is, midnight to midnight) should be considered separately. Actual mileage should be charged except when no mileage or less than 100 miles is made on any calendar day, in which event the minimum of 100 miles should be charged.

RULE 11. Information as to mileage made by cars must be furnished promptly on request of owners by railways over which cars are run, and when cars make no mileage on any calendar day the report must so specify.

RULE 12. (a) In no case shall car owner be charged for the second or subsequent applications of journal bearings if applied within 30 days from initial application at same journal location on same road, same trip, except when renewed within such period account change of wheels or axle at same journal location, in case the application of wheels is chargeable to owner.

(b) The billing repair card must specify for journal bearings applied and removed, whether solid, filled or other kind, length of journal and box number.

RULE 13. No direct labor charge shall be made for applying brake shoes, journal bearings, hose (air, steam or signal), incandescent bulbs, gas domes, gas bulbs, gas globes, gas bowls, gas pillars, mantles, tips, filling lamps, charging storage batteries, gasing tanks, icing,

RULE 13 — *Continued.*

coaling and watering cars or for inspection of cars, testing or adjusting brakes, adjusting angle cocks, tightening unions or spreading cotters.

No charge to be made for the material or labor of lubrication, except in line service.

INTERPRETATION. Q.— This rule provides that no labor shall be charged for applying certain items of materials, but no reference is made to knuckles and individual parts of the coupler. Is such charge permissible?

A.— This rule mentions the items on which no labor charge can be made. Therefore, labor used in renewing or repairing other items is permissible at the rate of $1.30 per hour on passenger-car work.

RULE 14. No credit to be allowed for burned-out incandescent bulbs, burned-out fuses or scrap brake shoes removed.

NOTE.— Steel back brake shoes not to be removed if over one-half (½) in. thick; gray iron shoes not to be removed if over three-quarters (¾) in. thick.

RULE 15. (a) Brakes must be in perfect working order. Brake cylinders and slack adjusters must have been cleaned and oiled within twelve months. Triple valves, control valves and high-speed valves must have been cleaned, oiled and tested within six months, and date of last cleaning and oiling stenciled on brake cylinders or control valves with white paint. Dirt collectors and strainers must be cleaned every six months at time of cleaning triple valves or control valves.

RULE 15 — *Continued.*

(b) The adjustment of piston travel, based on not less than seventy (70) lb. initial pressure, must not be less than five (5) in. nor more than eight (8) in.

(c) Air-brake hose applied must be new and made in accordance with specifications for A. R. A. standard 1¾ in. hose, and so labeled.

RULE 16. Private or other cars, except regular line cars, when offered in interchange equipped with steam hose couplings that will not couple with the standard on the receiving line must be changed by receiving company; the hose removed to accompany car and be reapplied when car leaves the line.

RULE 17. If a car is transferred from one railroad to another, the receiving road shall issue gas certificate or defect card authorizing the delivering road to bill against it for the number of atmospheres of gas and number of holders at the time car was received.

(Name of Road.)

GAS CERTIFICATE.

.....

Car Number ..... **Initial** .....

Number of Atmospheres .....

Number of Holders .....

Size of Holders .....

..... **Station,** .....**19**...

.....**Inspector.**

RULE 18. The depreciation of all passenger equipment cars due to age shall be figured at 3 per cent per annum upon the yearly depreciated value of same, to continue not to exceed 50 per cent of its original value. The above method of depreciation applies equally to either body, air brakes or trucks of such cars. The excess cost of betterments applied, depreciated from the date of application, may be added to the depreciated value of the car.

RULE 19. Bills for maintenance of passenger cars should be handled as provided in Rules 91 to 97, inclusive, of the freight code of rules. Original record of repairs and billing information shall be prepared as required in the freight car rules.

Separate bills must be rendered monthly for:

(a) Repairs.

(b) Cars destroyed.

(c) Line Service expense.

(d) Electric lighting; repairs made to electric service equipment may be included in same bill with other repairs; however, bills for rental of electric lighting equipment should be rendered separately. The prices for materials and labor to be governed in accordance with these Rules.

The A. R. A. definition of passenger train cars shall determine whether or not cars are of passenger construction.

RULE 19 — *Continued.*

The A. R. A. rules and prices covering repairs to freight equipment cars will govern in cases of repairs to cars of freight car construction, moving in passenger service, and the A. R. A. rules and prices covering repairs to passenger equipment cars will govern in cases of repairs to cars of passenger car construction moving in freight service. In cases of cars of freight car construction, equipped with passenger car trucks, the A. R. A. rules and prices covering repairs to passenger equipment cars will govern, in case of repairs to such trucks, irrespective of the kind of service in which the car is used.

RULE 20. For repairs made on and after October 1, 1918, and prior to September 1, 1920, thirty per cent shall be added to the net total amount of the bill for labor and material; this provision to apply to all charges authorized in these rules with the following exceptions:

Twenty-five per cent may be added to the charges for repairs made on authority of defect card issued between January 1, 1917, and October 1, 1917; thirty-five per cent on defect cards issued between October 1, 1917, and October 1, 1918; thirty per cent on defect cards issued on and after October 1, 1918, and prior to September 1, 1920; regardless of date of repairs.

No percentage to be added to bills rendered by car owners for material furnished by them for repairs to their cars on foreign lines.

No percentage to be added to freight or express charges on material furnished by owners for repairs to their cars.

No percentage to be added to bills covering settlement for destroyed cars or trucks under Rule 112.

LABOR.

RULE 21. The following labor charges are applicable for the items mentioned:

No.	LABOR	Charges
1	Nuts, nut locks or lock nuts, any size, R. & R. or R., each	0.1 hr.
3	Bolts or rods, tightening, each	$0.01
4	Lag screws, renewed, each	0.1 hr.
5	Journal box lid, one, renewed	0.3 hr.
6	Bolts, miscellaneous, 6 in. or less in length, each	0.2 hr.
7	Bolts, miscellaneous, over 6 in. in length, each	0.4 hr.
8	Bolts, key or brake pin, separately, one renewed	0.2 hr.
8A	Brake beam head, hinged type, or adjustable type on beams for clasp brake trucks, renewed, when not necessary to R. & R. beam, each	0.8 hr.
9	Backs of seats and cushions of passenger cars, either vestibule or common, removing and beating or cleaning by air, per car	$4.32
10	Cleaning baggage cars, each:	
	Inside	$2.34
	Outside, including trucks	1.67
11	Cleaning common passenger and combination cars, each:	
	Inside	2.99
	Outside, including trucks	2.38

No.	LABOR	Charges
12	Cleaning mail cars, each:	
	Inside	$5.98
	Outside, including trucks	1.80
13	Cleaning mail-apartment cars, each:	
	Inside	4.66
	Outside, including trucks	1.99
14	Cleaning carpets, seats, draperies, etc., parlor and sleeping cars, by beating or by air, including cleaning inside, per car	11.63
15	Cleaning parlor and sleeping cars, outside, including trucks	6.65
16	Cleaning vestibule passenger and combination cars, including vestibules and trucks, each:	
	Inside, single windows	5.31
	Inside, double windows	5.98
	Outside, single windows	3.32
	Outside, double windows	3.98
16A	Cylinder, 14 in. or less in diameter, cleaned, repaired, oiled, tested and stenciled as per Rule 15, exclusive of renewal of cylinder non-pressure head, cylinder piston and cylinder piston packing leather (material) and renewal of cylinder body and cylinder pressure head (labor and material), average charge	1 88

DETAILS

	Cents
Removing push rod (1 connecting pin)	11
Clamping cylinder piston (1 cap screw)	7
Removing cylinder head (4 nuts, 1½ in., 3½ cents each	14
Cleaning, testing, repairing and stenciling cylinder	156
	188

17	Drinking water container, cleaning and steaming, including R. & R., each	.66
17A	Gasket, steam hose, renewed, each	0.3 hr.
18	Glass, setting, per light	$0.96
19	Labor, on lubrication, per hour	0.90
20	Labor, on repairs, per hour	1.30

RULE 21 — *Continued.*

No.	LABOR	Charges
20A	Triple valve, ordinary quick action, removed, cleaned, oiled, tested and stenciled as per Rule 15, including all necessary repairs (labor and material), exclusive of renewal of body or conversion of valve from one type to another, average charge	$3.06
	DETAILS Cents Train pipe union disconnected 11 Retaining pipe union, disconnected 11 Removing triple (2 nuts, 5/8 in., 7 cents each 14 Check valve case (2 cap screws) 7 Emergency valve seats 18 Cylinder cap (3 bolts) 12 Cleaning, testing, stenciling and repairing, including material 233 306	
21	Wheels, labor changing, center pair only	11.82
22	Wheels, labor changing, center pair with one pair outside wheels, in same truck	13.02
23	Wheels, labor changing, center pair with two pair outside wheels, in same truck	17.74
24	Wheels, labor changing, outside pair, when center pair is not renewed	8.80
25	Wheels, labor changing, two outside pair in same truck, when center pair is not removed, or two pair in four-wheel truck	13.20
26	Wheels, wrought steel or steel-tired, turning to provide full flange and standard tread contour (not including R. & R.), per pair	1.8 hr.

NOTE.— For items of labor not covered in this rule, the amount chargeable shall be the actual number of hours consumed multiplied by the A. R. A. rate per hour. Prices quoted for cleaning cars include necessary cleaning material.

INTERPRETATION. Q.—Should the charge of 55 cents for steaming and cleaning and removing and replacing of drinking water containers in passenger equipment cars be prorated as a line expense on cars operated in

RULE 21 — *Continued.*

line service or should it be considered an owner's expense?

A.— This should be considered a line expense on cars operated in line service, and a handling line expense on cars not in line service, except on business or private cars, in which case it should be considered an owner's responsibility.

RULE 22. Prices for materials used in repairs made under these rules shall be in conformity with schedule shown below:

No.	MATERIAL	New	Second-hand	Scrap
1	Axle 50,000 lb. or under	$21.90	$13.40	$ 7.00
2	Axle 60,000 lb.	25.00	15.00	8.25
3	Axle 80,000 lb.	35.00	21.00	11.60
4	Axle 100,000 lb.	42.35	25.40	14.00
5	Axle 140,000 lb.	49.00	29.40	16.35

No.	MATERIAL	Charge	Average Credit
6	Air-brake hose, A. R. A., standard, 1⅜ in., complete with fittings, applied	$3.20	$0.90
7	Air-signal hose, complete, with fittings, applied	3.10	.90
			Credit
8	Bolts, nuts and forgings, per lb	.075	.01
9	Brake shoes, reinforced, applied, each	.71	.....
10	Brake shoes (flanged), applied, each	1.25	.....
11	Brake-shoe key, applied, no credit for scrap	.08	.....
12	Burners, dual wick, applied, each	.55	.....
13	Burners, round wick, applied, each	1.00	.....
14	Candles, per lb	.17	.....
15	Castings, rough, iron, per lb	.04	.01
16	Castings, rough, malleable, per lb	.12	.01
17	Castings, rough steel, per lb	.15	.01
18	Chain, per lb	.09	.01
19	Chimneys, dual wick, applied, each	.12	.....
20	Chimneys, round wick, applied, each	.20	.....
21	Coal, Anthracite (including labor), per ton	15.00	.....
22	Conductor's valve or signal cord and couplings, applied, per car	1.76	.....
23	Gas mantles, applied, each	.55	.....
24	Gas, Pintsch, per receiver, net	1.70	.....
25	Hose, 1⅝ in., straight port, steam, complete with fittings, applied	7.41	3.70
26	Hose, as above, 1¼ or 1½ in., applied	7.41	3.70

RULE 22 — *Continued.*

No.	MATERIAL	Charge	Average Credit
27	Ice (including labor), per cwt.	.65	.....
28	Journal bearings, brass or bronze, lined or unlined, per lb., applied	.24	.17
29	Journal bearings, cast steel or malleable iron back, credit for scrap, per lb	.....	.02
30	Journal bearings, filled brass or bronze shell, per lb., applied	.20	.17
31	Journal bearings. Weights to be charged and credited as follows:		
	For Journals	Lb.	Lb.
31A	7 in. long and over, but not 8 in. long	10	6
31B	8 in. long and over, but not 9 in. long	13	8
31C	9 in. long and over, but not 10 in. long	20	12
31D	10 in. long and over, but not 11 in. long	25	15
31E	11 in. long and over	37	23
32	Lumber—yellow and Norway pine, oak, hickory, elm and fir, dressed and framed, per foot B. M. required to make the part	$0.11	.....
33	Nails, per lb	.06	.....
34	Oil, car, per gal	.20	.....
35	Oil, coach, per gal	.43	.....
36	Oil, illuminating, American roads, per gal.	.15	.....
37	Oil, illuminating, Canadian roads, per gal.	.23	.....
38	Shades, Acme or common lamp, applied, each	.85	.....
39	Steel, elliptical springs, per lb	.08	$0.01
40	Steel, helical springs, per lb	.07	.01
41	Terminal car heating, per day of 24 hours or less. (See Note below)	.75	.....
42	Waste, woolen, per lb., applied	.23	.....
43	Waste, cotton, per lb., applied	.16	.....
44	Wicks, dual, applied, each	.03	.....
45	Wicks, round, applied, each	.07	.....
46	Wheels, wrought steel, value of service metal, per $\frac{1}{16}$ in., 33 in. wheel	2.21	2.21
47	Wheels, wrought steel, value of service metal, per $\frac{1}{16}$ in., 36 in. wheel	2.47	2.47
48	Wheels, wrought steel, value of service metal, per $\frac{1}{16}$ in., 38 in. wheel	2.54	2.54
49	Wheels, steel-tired, average value service metal, per $\frac{1}{16}$ in.	2.54	2.54

RULE 22 — *Continued.*

No.	MATERIAL	New	Second-hand	Scrap
50	One 36 in. cast iron wheel.....	$22.05	$13.23	$7.50
51	One 33 in. cast iron wheel.....	17.15	9.45	5.85
52	One 36 in. wrought steel.....	65.84	.....	8.00
53	One 33 in. wrought steel.....	58.55	.....	5.55
54	One 33 in. cast steel.....	51.65	28.40	5.85

NOTE.—New 33 in and 36 in. wrought steel wheels must have base of limit groove not less than 29½ in. and 32½ in., respectively, in diameter, must contain 1½ in. service metal (on radius of tread) above condemning limit (which is ¼ in. above base of limit groove). In no case shall a charge or credit for service metal be made in excess of 1½ in.

NOTE.—Material which can only be obtained from one manufacturer or concern and therefore not subject to competitive prices, may be charged at net store department cost.

NOTE.—Material not listed above, but listed in Rule 101 of the freight car rules (if same as that used on freight car), shall be charged at prices shown in Rule 101.

All other material to be charged at net store department cost, except material ordered from car owner, which shall be handled in accordance with Rule 122 of the freight car rules.

NOTE.—Cars lying at stations for over 48 hours, expense of heating to be borne by railway in whose possession car may be if the delay is due to the handling line.

RULE 23. Acceptance or rejection of this code of rules must be as a whole, and no exception to an individual rule or rules shall be valid.

RULE 24. This code of rules shall apply to all passenger equipment cars interchanged in passenger trains, and becomes effective November 1, 1920.

LIST OF RAILROAD COMPANIES.

The following is a complete list of railroad companies which have given notice of the adoption of the Code of Rules for the interchange of passenger equipment cars:

Alabama & Vicksburg.
American Railway Express.
Arms Palace Horse Car Co.
Atlanta & Birmingham Air Line.
Atlantic, Valdosta & Western.
Baltimore & Ohio.
Bangor & Aroostook.
Boston & Albany.
Boston & Maine.
Burlington, Cedar Rapids & Northern.
Butte, Anaconda & Pacific.
Cairo, Vincennes & Chicago.
Canadian Pacific.
Carolina, Clinchfield & Ohio.
Central of Georgia.
Central Vermont.
Chesapeake & Ohio.
Chicago & Alton.
Chicago & Eastern Illinois.
Chicago & Erie.
Chicago & North Western.
Chicago, Burlington & Quincy.
Chicago Great Western.
Chicago, Milwaukee & Puget Sound.
Chicago, Milwaukee & St. Paul.
Chicago, Rock Island & Pacific.
Choctaw, Oklahoma & Gulf.
Cincinnati, Hamilton & Dayton.
Cincinnati, Indianapolis & Western.
Cincinnati, New Orleans & Texas Pacific
Cleveland, Cincinnati, Chicago & St. Louis
Cleveland, Lorain & Wheeling.
Cleveland Terminal & Valley.

Colorado & Southern.
Cornwall & Lebanon.
Cumberland Valley.
Delaware, Lackawanna & Western.
Denver & Rio Grande.
Detroit, Toledo & Milwaukee.
Detroit & Lima Northern.
Doniphan, Kensett & Searcy.
El Paso & Southwestern.
El Paso & Southwestern System.
Erie.
Evansville & Terre Haute.
Evansville & Indianapolis.
Fitchburg.
Florida East Coast.
Fort Worth & Denver City.
Georgia.
Georgia & Florida.
Golden Circle.
Grand Rapids & Indiana.
Grand Trunk.
Grand Trunk Pacific.
Green Bay & Western.
Hocking Valley.
Hutchison & Southern.
Illinois Central.
Intercolonial Ry. of Canada.
Kanawha & Michigan.
Kansas City Southern.
Lehigh Valley.
Long Island.
Louisiana & Arkansas.
Louisville & Nashville.
Manitoba & North-Western Railway of Canada.
Mason City & Fort Dodge.
Michigan Central.
Midland Valley.
Minneapolis & St. Louis.
Mississippi River & Bonne Terre.
Mississippi River, Hamburg & Western.
Missouri, Kansas & Texas Ry.

Missouri, Kansas & Texas Ry. Co. of Texas.
Missouri Pacific.
Mobile & Birmingham.
Monongahela.
Nacozari.
Nashville, Chattanooga & St. Louis.
National Rys. of Mexico.
Nevada Copper Belt.
New Orleans & Northeastern.
New York Central.
New York, Ontario & Western.
New York, Philadelphia & Norfolk.
New York & Ottawa.
Northern Pacific.
Oregon Railway & Navigation Co.
Oregon Short Line.
Ottawa & New York.
Pennsylvania Railroad Co.
Pennsylvania Railroad Co., Western Lines.
Pennsylvania, Poughkeepsie & Boston.
Pere Marquette.
Philadelphia, Baltimore & Washington.
Philadelphia & Reading.
Pittsburgh & Lake Erie.
Pittsburgh & Western.
Pittsburgh, Cincinnati, Chicago & St. Louis.
Plant System.
Rio Grande, Sierra Madre & Pacific.
Rio Grande Western.
Rock Island & Peoria.
San Antonio & Aransas Pass.
Seaboard Air Line.
Sioux City & Northern.
Southern.
Southern Indiana.
Southern Pacific Company.
South Florida.
Southwestern of Arizona.
Spokane Falls & Northern.
St. Louis, Chicago & St. Paul.
St. Louis, Iron Mountain & Southern.
St. Louis. Kansas City & Colorado.

St. Louis Southwestern.
St. Louis Southwestern of Texas.
St. Louis & Hannibal.
St. Louis & San Francisco.
Temiskaming & Northern Ontario.
Tennessee Central.
Texas & Pacific.
Toledo & Ohio Central.
Toledo & Ohio Central Extension.
Toledo, Columbus & Cincinnati.
Toledo, St. Louis & Western.
Toronto, Hamilton & Buffalo.
Trinity & Brazos Valley.
Tyler South Eastern.
Union Pacific.
United Counties.
Vera Cruz & Pacific.
Vicksburg, Shreveport & Pacific.
Wabash.
Wade, Geo. L.
West Jersey & Seashore.
Western Pacific.
Western Union Telegraph Co.
West Virginia Central & Pittsburgh.
Wheeling & Lake Erie.
Zanesville & Western.

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NOTE.—The letter "x" after a rule number refers to interpretation of rule.

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AMERICAN RAILWAY ASSOCIATION

CODE OF RULES
(M. C. B.)

GOVERNING THE CONDITION OF, AND REPAIRS TO, FREIGHT AND PASSENGER CARS

FOR THE

INTERCHANGE OF TRAFFIC

ADOPTED BY THE

American Railway Association
MECHANICAL DIVISION

1920 CODE.

SUPPLEMENT No. 1

PUBLISHED BY THE AMERICAN RAILWAY ASSOCIATION,
75 Church Street, New York
431 South Dearborn Street, Chicago

JUNE, 1921

CODE OF RULES

Governing the Condition of, and Repairs to, Freight Cars for the Interchange of Traffic.

RULE 2. The following interpretations of this rule have been rendered by the Arbitration Committee:

Q.—Can a car be refused account welded truck side which may have been welded previous to January 1, 1920?

A.—Rule 2 gives the receiving line the right to refuse any car which in its judgment is unsafe for movement on its line. It is assumed that this question concerns a truck side with a defective weld.

Q.—Does Rule 2, Section (b), fourth paragraph, prohibit from interchange lighting outfits operated by petroleum oils with flash point above 80° F., such as kerosene or illuminating oil?

A.—No. This rule is restricted to cars, loaded or empty, using lighting outfits operated by engines using inflammable liquids with flash point 80° F. or lower, such as gasolene, motor fuel and alcohol.

RULE 3. The following interpretation of this

RULE 3—*Continued.*

rule has been rendered by the Arbitration Committee:

Q.—This rule permits the refusal of cars when not complying with the various requirements specified. If such cars are loaded, can they be refused, or must they be accepted and transferred at the expense of delivering line and empty car returned?

A.—Cars, whether loaded or empty, must not be offered in interchange if not equipped with an efficient hand brake, per Section A; and United States Safety Appliances or United States Safety Appliances Standard, per Section K, in good order.

Tank cars, whether loaded or empty, must comply with the requirements of Sections E and P.

None of the other objections referred to would permit rejection of lading.

RULE 17. The following interpretation of this rule has been rendered by the Arbitration Committee to supersede present interpretation No. 2, which is hereby withdrawn:

The conversion price for triple valve of $10.00 shown under interpretation No. 6 of this rule is changed to $11.30, effective July 1, 1921. This $11.30 represents manufacturer's minimum conversion price ($10.00), plus percentage for store expense, transportation charges and interest on stock investment.

Q.—Will it be necessary to stencil car equipped

RULE 17—*Continued.*

with "D" type couplers in order to protect them against substitution of the old style M. C. B. couplers?

A.—Yes. If car is so equipped at both ends the type should be added on the left of standard marking on car. If only one end is so equipped, such end (A or B) should also be added on the right, for example:

A. R. A. "D" Coupler Shank 5 by 7 B end.

RULE 23. The following interpretations of this rule have been rendered by the Arbitration Committee:

Q.—Under this rule is it permissible to weld arch bars, top or bottom?

A.—No. Section 2 prohibits such practice. Also, see rule 17, Section "I."

Q.—Is it permissible to weld a cast steel truck side frame?

A.—Diagram Figure 5 of the report of the Committee on Welding, as shown on pages 198-199 of the 1919 Proceedings of Section III-Mechanical, A. R. A., shows location of common defects to bolsters and side frames which may be welded under paragraph IV. The specifications for welding as laid down in this rule must be followed.

RULE 32. The following interpretations of this rule have been rendered by the Arbitration Committee:

Q.—If car is cornered, derailed or sideswiped,

RULE 32—*Continued.*

and damage is not caused by any of the five conditions named in Section (d), is it handling company's responsibility?

A.—Yes. The five conditions named in Section (d) are only some examples of irregular switching and cover cases of unfair usage other than is covered by other paragraphs of this rule.

Q.—Was Item (e) intended to include the defects on car with missing coupler?

A.—No. This item only applies to defects on adjacent car that are caused by handling car with missing coupler.

RULE 57. The following interpretation of this rule has been rendered by the Arbitration Committee:

Q.—Can defect card be required for air-brake hose complying with A. R. A. Standard requirements, except that the space between the two labels is less than 2 in.?

A.—No. The rectangular label referred to is not a requirement of the Standard Specifications for air-brake hose. The reason for this paragraph in the Rules of Interchange is to insure the labels being separate to facilitate inspection.

RULE 66.—The following interpretation of this rule has been rendered by the Arbitration Committee:

Q.—Is charge for periodical repacking of

RULE 66—*Continued.*

journal boxes authorized by this rule for new cars not stenciled to show date boxes packed?

A.—Charge for periodical repacking of journal boxes within the time limit on new cars where car is not stenciled to show date journal boxes packed, is not justified. In the case of new cars, the date built shown on car has the same significance as the date packed for journal boxes on an old car.

RULE 87. The following interpretation of this rule has been rendered by the Arbitration Committee:

Q.—Does the substitution of bolts for rivets in coupler yoke (in emergency cases) constitute wrong repairs for which defect card should be issued?

A.—Such substitution is considered as temporary repairs for which no charge should be made nor defect card issued, provided the repairs are due to owner's defects. If such repairs are made in a case of delivering line defects, defect card should be issued to cover the expense of standardizing the repairs.

RULE 98. The following interpretations of this rule have been rendered by the Arbitration Committee:

Q.—Please define conditions under which charge of 1.8 hours may be made for turning wrought steel and steel-tired wheels.

RULE 98—*Continued.*

A.—The amount of service metal to be charged is based on the standard full flange contour.

Therefore, labor charge of 1.8 hours for restoring standard full flange contour should be made where the wrought steel wheels applied (new or second-hand) have the standard full flange contour, while those removed have not, except where those removed are beyond the limit for turning to standard full flange contour.

If wheels applied do not have standard full flange contour, labor charge for restoring standard full flange contour should not be made, and in such case, if the wheels removed have the standard full flange contour, a credit should be allowed owner to cover the labor of 1.8 hours required to restore the standard full flange contour on the wheels applied.

Wheels applied should have standard full flange contour as far as practicable.

In charging for service metal where wheels applied do not have standard full flange contour, such charge should be confined to the amount of service metal which would remain after restoring the standard full flange contour.

Note: This information for both wheels applied and removed must be shown on billing repair card in order to check the charge or credit.

Q.—What credit should be allowed for cast iron wheels removed from cars when such ...

RULE 98—*Continued.*

wheels cannot be condemned by the standard wheel defect gage, but which cannot be remounted account of being condemned by the standard limit gage used for inspecting second-hand wheels for remounting as shown on Standard Sheet 16-A?

A.—When the cast iron or cast steel wheels have been removed from service account of owner's defect on wheel or axle, if the wheel is condemned by limit gage used for inspecting second-hand wheels for remounting as shown on Standard Sheet 16-A, such condemned wheel may be considered as scrap.

If such wheels are removed account of delivering company's defect on wheel or axle, such wheels may be scrapped at the expense of the delivering company.

This gage, however, is not to be used for removing wheels from service.

Q.—What method should be used in charging for cast iron wheels applied in place of wrought steel wheels?

A.—**In Case of Owner's Defects:** When cast iron wheels are applied in place of wrought steel wheels, standard to car, removed account of owner's defects, credit should be allowed the owner for the difference in value between the wrought steel wheels removed and the cast iron wheels applied, either new or second-hand, as the case might be, plus the labor of removing, and net value of journal bearings, box bolts and

RULE 98—*Continued.*

dust guards when renewed. Defect card to be applied for the wrong wheels.

In correcting these repairs on authority of defect card the owner should bill for the labor and net value of journal bearings, box bolts and dust guards if renewed.

In Case of Delivering Line Defects: Above rules to apply except that owner should be charged for second-hand value only of cast iron wheels applied (regardless of the application of new wheels) and should not be charged for labor nor for journal bearings, box bolts and dust guards, if renewed.

Effective July 1, 1921, Rule 101 is modified as follows:

Item 37 covering nipple on end of air train line is eliminated, this charge to be made in accordance with item 61.

Item 61 is changed to read as follows:

"Nipples, 12 in. or less in length, threaded."

Items 100 and 101 are modified to read as follows:

ITEM 100. Altering height of one end of car by adjusting center plates, and side bearings, charge for material used and labor on bolt, lag or rivet basis. (Add jacking.) This charge also applies to renewal of shims. No additional labor to be charged when bolster to which shims are attached are renewed.

RULE 98—*Continued.*

ITEM 101. Altering height of car by shimming springs, charge for material used and labor as per Item 401 of Rule 107. This charge also applies to renewal of shims.

Item 175 is changed to read as follows:

"Nut lock, or lock nut, 1 in. or less, no credit for scrap, $0.02."

New Item 175-A is added as follows:

"Nut lock, or lock nut, 1⅛ in. or over, no credit for scrap, $0.04."

New Item 210-A is added as follows:

"One A. R. A. No. 2 plus, trussed type, complete, with or without safety chain clips or finger guards, per Fig. 1—charge new $7.60, charge second-hand $5.70, average credit (defective or missing), $2.60."

Item 215 is eliminated.

RULE 105. Effective July 1, 1921. In view of revised allowances for nut locks and lock nuts, Items 175 and 175-A of Rule 101, interpretation No. 8 under Rule 105 is eliminated.

Effective July 1, 1921, Rule 107 is modified as follows:

RULE 105—*Continued.*

Ref. No.	OPERATION	Hours Ordinary Cars	Hours Refrigerator Cars
40	Body truss rod, per section R. & R. or R., includes handling only, exclusive of turnbuckle and nut. (This price also to be charged for full length rod without turnbuckle)	1.6	1.6
42	Body truss rod, tightening and replacing on saddle or queen post when necessary, empty or loaded car, per rod. (Use same basis for trussing entire car.) (This item must not be charged if end sill is slackened for other work.)	0.6	0.6
42A	Eliminated.		
87	Coupler follower guide strap bolts or draft pan bolts, renewed, when coupler is not R. & R. or R. or slackened at back end, per bolt. NOTE.—When coupler is R. & R. or R. or slackened at back end no additional labor charge can be made for renewing these bolts.	0.2	0.2
112	Center pin, head, key or plain, renewed, each (Excludes moving load.) Add jacking of car when necessary.	0.4	0.4
116	Coupler, slackened at back end for followers or springs, or both, or when necessary to renew stop bolts. (To be paid when it is not necessary to R. & R. coupler to make these repairs)	1.5	1.5
208	Eliminated.		
232	Lining, renewed, per square ft. (lining only)	$0.07	$0.10
237	Nuts, nut locks or lock nuts, any size (except body truss rod nuts) R. & R. or R., each.	0.1	0.1
237A	Nuts, body truss rod, R. & R. or R., empty or loaded car, each, includes tightening rod, per rod	0.6	0.6
244	Eliminated.		
342	One side sill, renewed, includes R. & R. or R. of fixtures secured to same, setting nails in and renailing but not renewing sheathing, or on gondola cars, the R. & R. of side stakes or raising coal side if done to renew sill	30.	49.
401A	Truck springs, as above, renewed, when car has not been raised for other repairs. Additional charge for jacking car for items 400 and 401-A will not be allowed.	1.0	1.0

RULE 105—*Continued.*

Ref. No.	OPERATION	Hours Ordinary Cars	Hours Refrigerator Cars
416	Truss rod or other turnbuckles, R. & R. or R., empty or loaded car, includes tightening rod, per turnbuckle.....	0.6	0.6
430	When the nut or nuts on any bolt 6 in. or less in length is removed in connection with overlapping repairs, no additional labor charge should be made for that bolt if renewed.		
431	When the nut or nuts on any bolt over 6 in. in length is removed in connection with overlapping repairs, the labor charge for that bolt, if renewed, shall be reduced by 0.1 of an hour.		

The following interpretation of this rule has been rendered by the Arbitration Committee:

Q.—Under Item 93 of Rule 107, as shown in Supplement No. 3 to the 1919 Rules, charge is shown for tightening of bolts. Does this not conflict with Rule 108?

A.—Yes. Rule 108 should govern and no charge can be made for tightening of bolts. For unsettled cases billed as per Item 93 of Rule 107 counterbilling authority should be issued.

Effective July 1, 1921, Rule 108 is modified as follows:

No labor to be charged for the inspection of cars, testing or adjusting brakes, adjusting angle cocks, tightening unions, bolts, bolt nuts or lag screws or spreading cotters; sill steps, ladder treads or hand holds, straightening on

RULE 105—*Continued.*

car; brake shafts or uncoupling levers straightened when not removed from car.

No charge to be made for the material or labor of lubrication, except as provided in Rule 66.

RULE 111. The first interpretation shown under this rule is corrected to read as follows:

Q.—Item 4, explanatory note, reads: "No overlap labor will be deducted when air hose is renewed and angle cock renewed or repaired." It would appear that this rule conflicts with Rule 101, Items 1 and 4 and Item 6 of Rule 111. Is it the intention that charge of eleven cents should be made for each application of new air hose and angle cock, or should the charge mentioned only apply when these parts are removed and replaced in connection with other repairs?

A.—There is no confliction. The prices specified in Rule 101, Items 1 and 4, include the labor of application, while Rule 111 provides that no reduction shall be made, in so far as overlap labor is concerned.

Effective July 1, 1921, Item 23 is modified to read as follows:

Retaining valve, cleaned and tested on or off car, $0.25.

RULE 112. There are several misprints in the table shown under Section (b) of this rule covering reproduction cost for use in settlement for cars destroyed as shown in the 1920 Rules of Interchange. This table is corrected to read as follows:

RULE 105—*Continued.*

	PRICES PER POUND.			
	Refrigerator.	Hopper and Box.	Coke.	All Others.
Class A. All steel	.....	$0.0686	$0.0647	$0.0625
Class B. Steel underframe with steel superstructure frame	$0.0793	.0645	.....	.0610
Class C. All steel underframe	.0793	.0635	.0610	.0610
Class D. All wood, with continuous metal center sill construction, with not less than 24 in. of sectional area between draft back stops, and with not less than one top or bottom cover plate from draft back stops to draft back stop	.0793	.0635	.0610	.0610
Class E. All wood, with not less than 8-in. continuous metal center sills of not less than 18 lb. per ft. per member, with not less than one top or bottom cover plate from bolster to bolster.				
All wood, with not less than 8-in. continuous metal draft of not less than 18 lb. per ft. per member, with not less than one top or bottom cover plate from bolster to bolster.				
All wood, with not less than 8-in. continuous metal draft of not less than 18 lb. per ft. per member, securely fastened to wooden center sills not less than 4 in. by 8 in.	.0734	.0569	.0569	.0569
Class F. All wood	.0677	.0512	.0512	.0512

STEEL TANK CARS—COMPLETE.

	Classes I, II and III.	Class IV.	Class V.
Without heater pipes	$0.0694	$0.0732	Reproduction cost.
With heater pipes	.0740	.....	.....

RULE 120. The following interpretation of this rule has been rendered by the Arbitration Committee:

Q.—If a car is shipped home (loaded on another) on special authority of the owner, for repairs of owner's defects, should defect card be issued for missing material and the labor necessary to replace same?

A.—In such cases of owner's defects it is suggested that defect card be furnished to cover all missing material, except wood parts, without labor for replacing the missing material.

In no case should a car be loaded on another and shipped home, except on authority from owner.

APPENDIX.

CODE OF RULES

Governing the Condition of, and Repairs to, Passenger Equipment Cars in Interchange.

RULE 2. The following interpretation of this rule has been rendered by the Arbitration Committee:

Q.—Does Rule 2, Section (b), prohibit from interchange lighting outfits operated by petroleum oils with flash point above 80° F., such as kerosene or illuminating oil?

A.—No. This rule is restricted to cars, loaded or empty, using lighting outfits operated by engines using inflammable liquids with flash point 80° F. or lower, such as gasolene, motor fuel and alcohol.

The interpretation under Rule 13 is hereby withdrawn.

Effective July 1, 1921, the following item is added to Rule 21:

2-A.— Buffer, any style, on cars with or without diaphragm face plate, slackened in order to R & R or R coupler knuckle, lock or pin, each, charge 1.0 hour.

RULE 22. Effective July 1, 1921, the charge and average credit under Item 47 is changed to $2.41.