

*Welcome to the St. Louis Area
Railroad Prototype Modelers Seminar
August 12-13, 2016
Collinsville, Illinois*

**American Car & Foundry Co.
ICC-105A, 11,000-Gallon,
Type 27 Tank Cars
- Prototype cars built 1947-1950
& the Kadee HO Model -**

Contributor Acknowledgements Photo & Technical Data Sources

- **Sources of ACF builder photos & technical data**
 - **ACF Collection, Barriger National Railroad Library (St. Louis Mercantile Library) & special thanks to Nick Fry & staff**
 - **ACF Industries, Hawkins/Wider/Long collection**
 - **Teresa Militello, Museum of Transportation**
 - **George Sisk, Charles E. Winters collection**
 - **Bob Liljestrand of Bob's Photo**
 - **Jim Gerstley collection**
 - **Kadee Quality Products - model photos**
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The Prototype Cars - ICC-105A, 11,000 Gallons (Nominal), A.A.R. Class TPI, 1,650 Cars Built 3-47 to 10-50



- **Forum about the pressurized tank cars built by ACF at Milton, Pa. & the basis of the new Kadee HO tank car model.**
- **Discussion about the Atlas N, HO, and O scale tank car models based on something else.**

Kadee Quality Products #9005 ICC-105A, 11,000-Gallon Tank Car

Kadee's first HO scale tank car model (TWOX 4003) released in July 2015.

Four HO models released to date.



To Whom and Why is This Important?

- **Modelers interested in cars built March 1947 & later through at least the 1960s to 1970s**
 - **Learn about the prototype cars & help to make informed decisions when buying Kadee HO models and Atlas models in 3 scales**
 - **Some cars for localized movements; others more regionally or nationally**
 - **Fuelane Corp. (FCX) cars of Liberty, N.Y., were spiffy, but unlikely to show up on the Great Northern or Southern Pacific**
 - **UTLX & some SHPX cars regionally or nationally**
 - **Whereas, Frisco modelers.....**
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**Frisco modelers....
might want more than one WARREN car.**



Roster Handouts – Download On Line

1. By Lot Number (6 pages)

www.rpcycpub.com/ACF105A-lot.pdf

2. By Reporting Marks & Car Number (9 pages includes ORER data 1/48 - 1/60)

www.rpcycpub.com/ACF105A-road.pdf

Email – hawk0621@sbcglobal.net

Some Background on Three Commodities Transported in Larger ICC-105A Tank Cars

- **Liquefied petroleum gas (LPG, propane) - collected as by-product of natural gas processing and petroleum refining**
 - **Frank Philips of Philips Petroleum - instrumental in making the collection of propane practical in the 1920s**
 - **Anhydrous ammonia - chemical compound (NH_3) used for soil enrichment and fertilizer for crops**
 - **Ethylene oxide – chemical compound ($\text{C}_2\text{H}_4\text{O}$) used for production of glycols including antifreeze; paints, solvents, disinfectants, explosives**
 - **When compressed under sufficient pressure, these commodities are liquid; when above their boiling temperatures and uncompressed, they are gaseous.**
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Large-Size Pressurized Tank Cars in Perspective (Sizes are Nominal)

- **With respect to ACF, origin dates to August 1926 with four A.R.A. Class V pressurized tank cars of 10,000-gallon capacity built for Carbide & Carbon Chemicals Corp. (LPG service)**
 - **Earliest ACF 11,000-gallon Class V tank cars built in July 1927 for Mathieson Alkali Works (anhydrous ammonia service)**
 - **Later in 1927, A.R.A. V Class designation changed to ICC-105A with various pressures (governed by the Interstate Commerce Commission)**
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Demand Increases, More New Cars

- **Late-1920s to postwar period - propane became increasingly popular for home heating & cooking, mainly in rural areas; demand for anhydrous ammonia also increased after World War II**
 - **Railroad industry developed & built new tank cars to transport these commodities**
 - **To meet demand through 1946, ACF built about 1,500 ICC-105A tank cars of Type 27 design, 10,500 & 11,000 gallons, typically 40' & 42' in length (article on 10,500-gallon cars in *RP CYC* Vol. 7)**
 - **By 1947 phase-out of ACF Type 27 tank cars; one more large group of 11,000-gallon, 105A tank cars to be built with different dimensions (nearly 4' shorter in length, larger-diameter tank)**
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A.A.R. Classification TPI ICC-105A Descriptions

TPI – Insulated tank car equipped with container.

Two Pressures, Quantity Built 3/47 – 10/50

ICC-105-A-300-W 1,302 cars

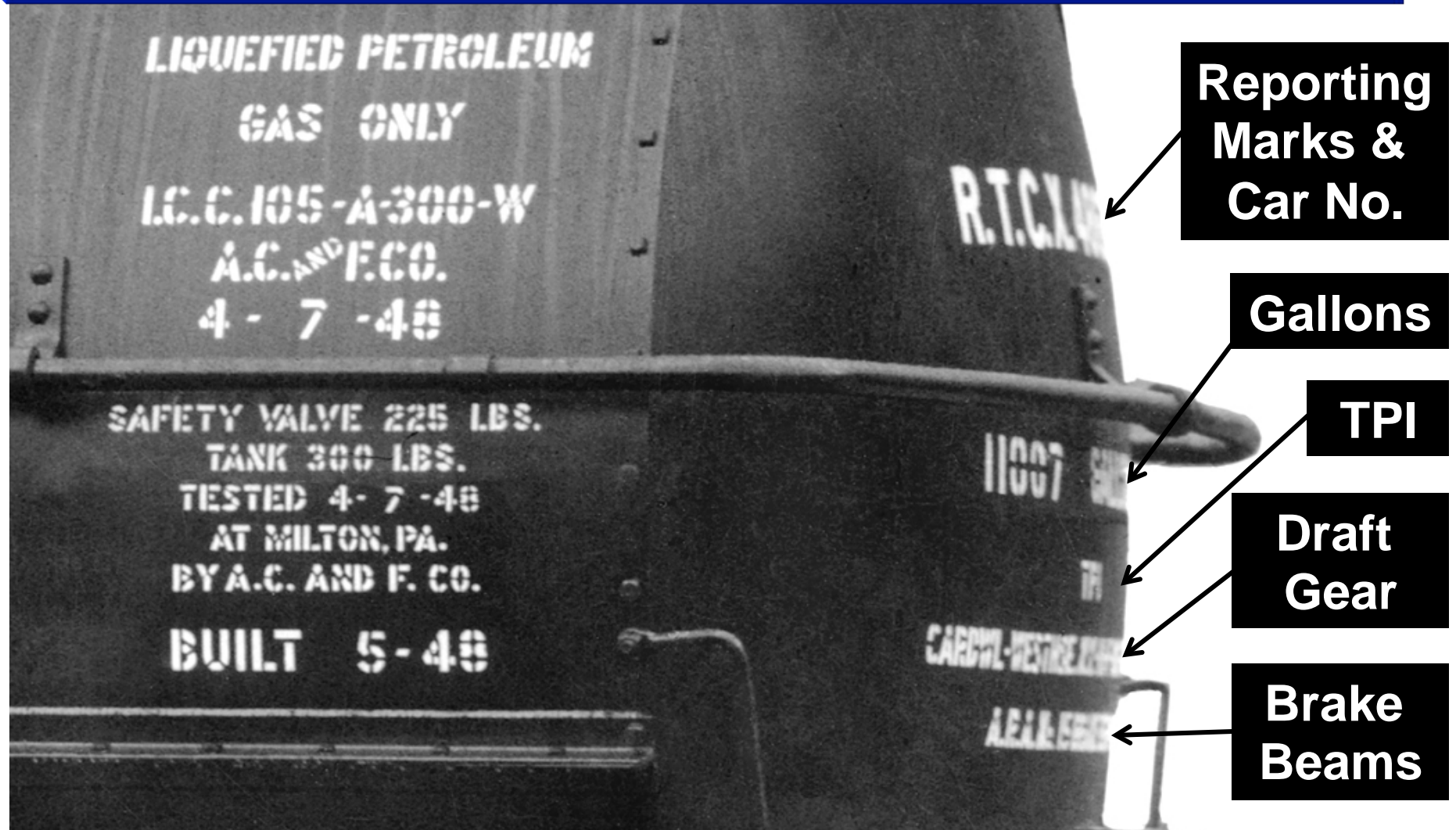
ICC-105-A-400-W 348 cars

ICC-105-A-300-W – Lagged (jacketed) fusion welded open-hearth flange quality boiler steel tank. Tanks tested to a pressure of 300 lb. and safety valves set at 225 lb. (40-ton to 50-ton trucks)

ICC-105-A-400-W – same as above except tanks tested to a pressure of 400 lb. and safety valves set at 300 lb. (ranged from 45-ton to 50-ton trucks)

Common Stencils on New Tank Cars

Commodity, I.C.C. Class, Builder, Build Date, Safety Valve & Test Data, End Stencils



General Dimensions (1947-1950) 11,000-Gallon, ICC-105A, Type 27

Underframe

Truck Centers	Length (over end sills)	Length (over strikers)	Width (over running boards)
27'-11"	38'-5 $\frac{1}{8}$ "	38'-6 $\frac{1}{2}$ "	9'-8" (a few exceptions)

Tank

Capacity (Gallons)	Diameter (inside)	Length (inside)	Shell Thickness
11,000	89 $\frac{1}{4}$ "	35'-2 $\frac{7}{8}$ "	105A300W - 45/64" 105A400W - 15/16"

All cars 4" fiberglass insulation surrounding steel tank.
 $\frac{1}{8}$ " steel jacket, 6 overlapping sections, welded.
 300W: 99" jacket O.D., approx. (add .5" for 105A400W).

11,000 Gallon, Type 27 General Design Common Features of ICC-105A Tank Cars

- 1. Type 27 underframe primary structure:**
 - 2 – 13" rolled channel center sills, riveted top plate**
 - 4 – 7" rolled channel side sills (bolsters to end sills)**
 - 2 – 9" rolled channel end sills (2" difference to allow for run. boards)**
 - 2 – built-up riveted bolsters, crossties, & brake attachments**
 - 2. Dome housing: 18" I.D. (20" O.D.) x 12" height**
 - 3. Hand rails: 1¼" nominal O.D. pipe (1.66" actual dia.)**
 - 4. AB brake arrangement: All 3 brake parts on same side of center sill**
 - 5. Tank anchors: 2 anchors (2¼" x ½" straps), 4 turnbuckles attached to bolsters, passes through covered slits in jacket to prevent leakage**
 - 6. Hand brakes: ACF Geared, scalloped hand wheel**
 - 7. Side ladder stiles: 2½" x ½" steel, 16" apart (21" overall width)**
 - 8. Hazardous material placards: 4/car, one each per side & end**
 - 9. Draft gear: Cardwell-Westinghouse NY-11-F without known exceptions**
 - 10. Uncoupling mechanism & couplers: Bottom-operated Type "E"**
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Variations & Customer Options 11,000-Gallon, ICC-105A Tank Cars

1. Running boards (variation):

Wood (1 $\frac{7}{8}$ " x 11 $\frac{3}{4}$ " x 38') - 170 cars, 3-7/47

Apex Tri-lok (2" x 11 $\frac{3}{4}$ " x 38', 5 sections) - 1,480 cars, 7/47-10/50

2. Dome platforms (option):

Wood full-surround (6'-2" x 4'-5") 170 cars, 3-7/47

Apex full-surround (6'-6" x 4'-7") 843 cars, 7/47-12/49

Apex – sides (1" x 8 13/32" x 4') 637 cars, 9/47-10/50

3. Side ladders: Heights vary depending on type of dome platform

4. Hand holds attached to side of jacket at each end (variation):

Perpendicular to jacket, 258 cars, 1947

Parallel with jacket, 1,342 cars, 1948-1950

5. Trucks (option):

Double-truss spring-plankless (856)

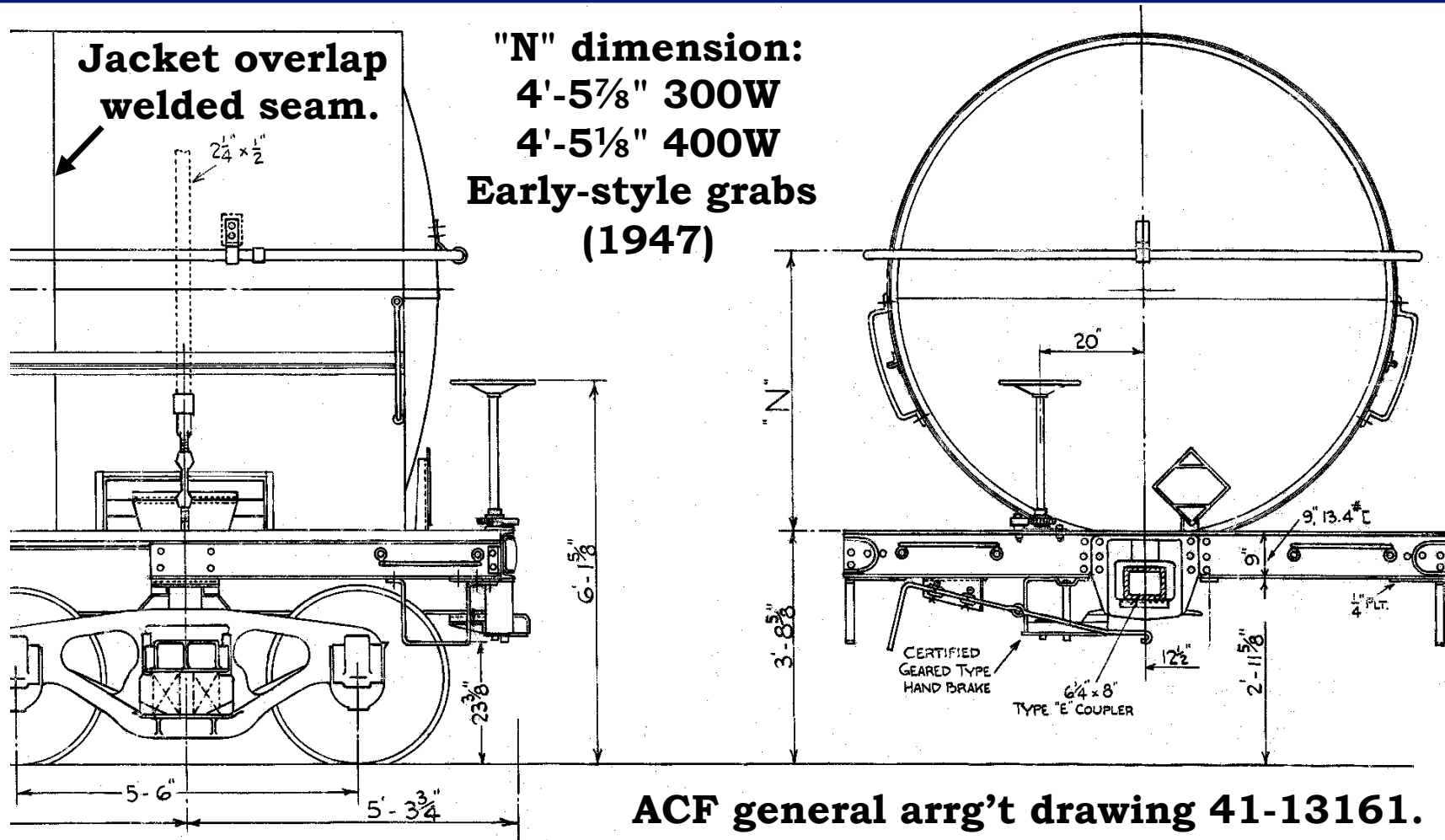
A.A.R. spring plank (722)

A-3 Ride Control (70, early SHPX order, wood running boards)

Barber S-2 (2, one order for UTLX)

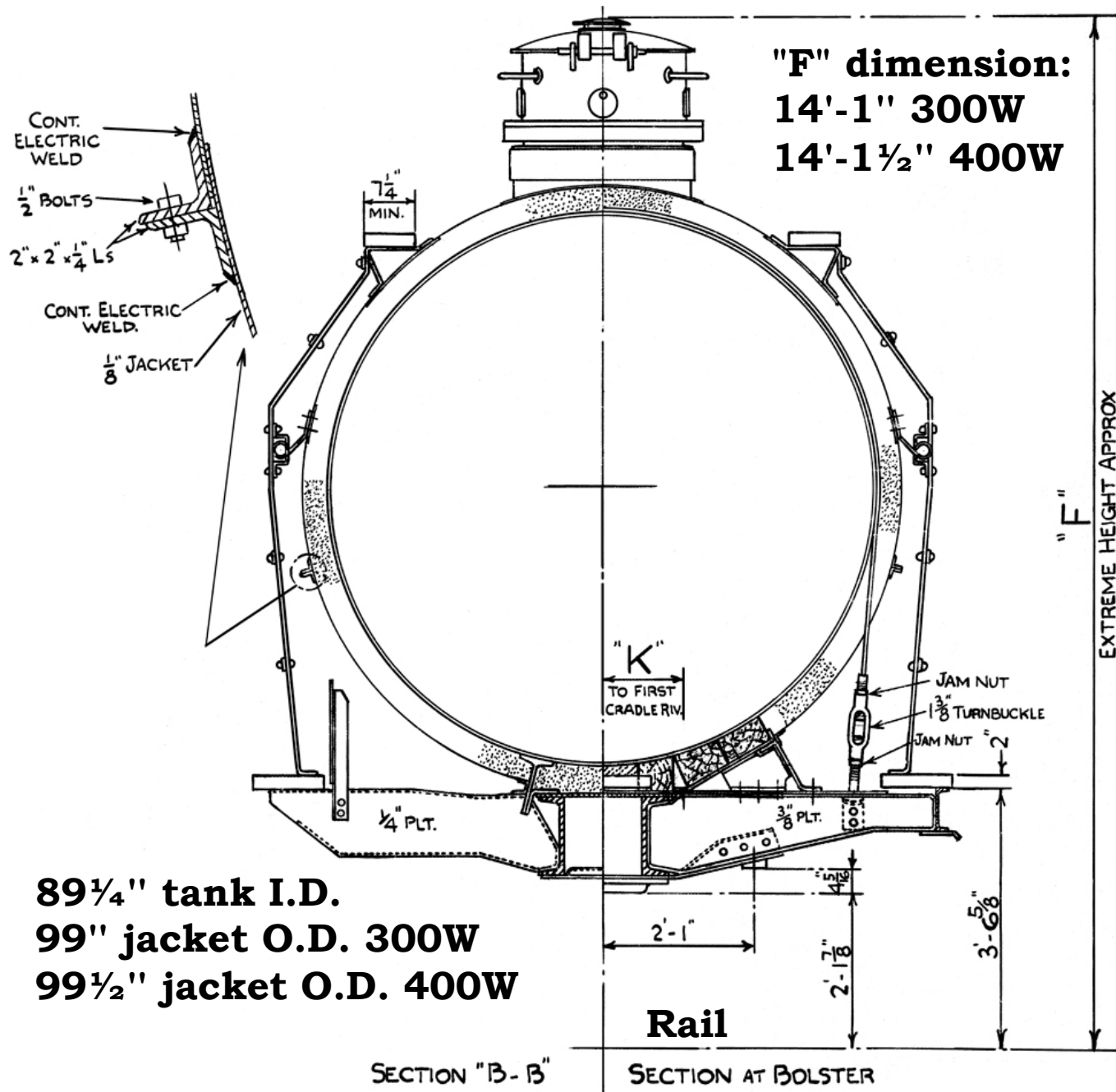
6. Wheels (option): 33" chilled (cast iron) or steel

Partial Side & End Elevation 11,000-Gallon, ICC-105A, Type 27 Tank Cars

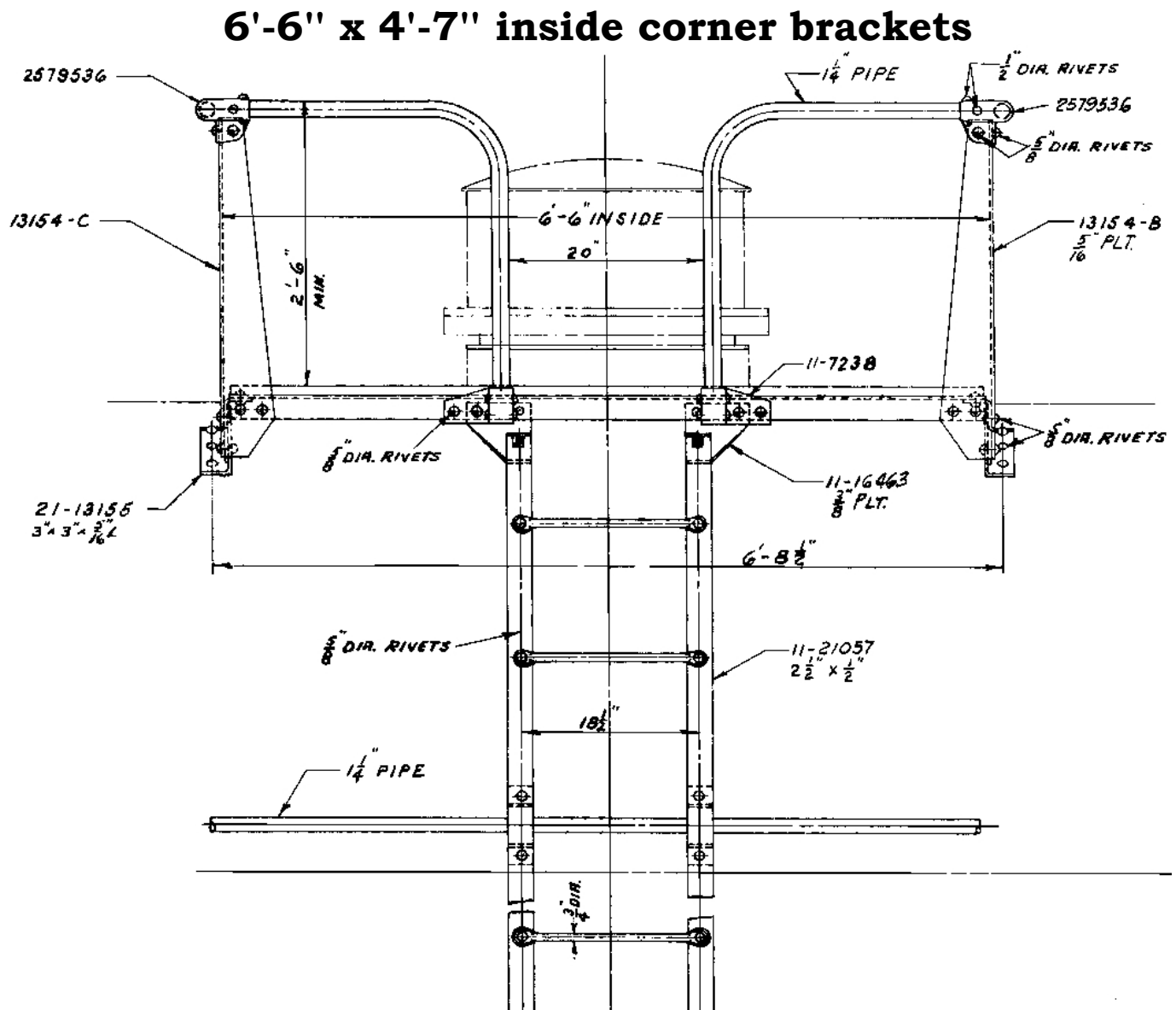


Cross Section at Bolster (right)/ Crosstie (left)

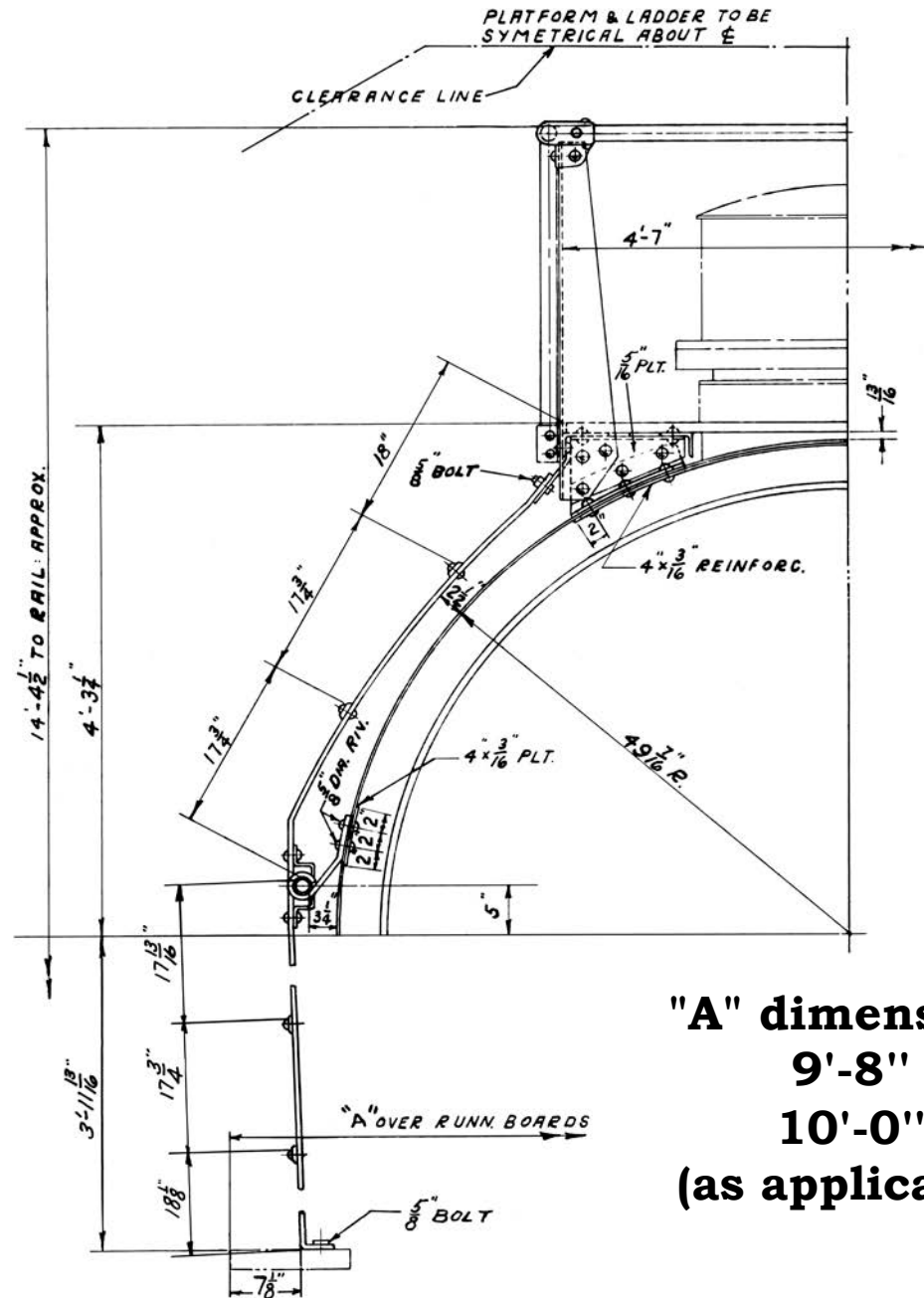
With Side Platforms



Full-Surround Apex Dome Platform Side Elevation



Full-Surround Apex Dome Platform End Elevation



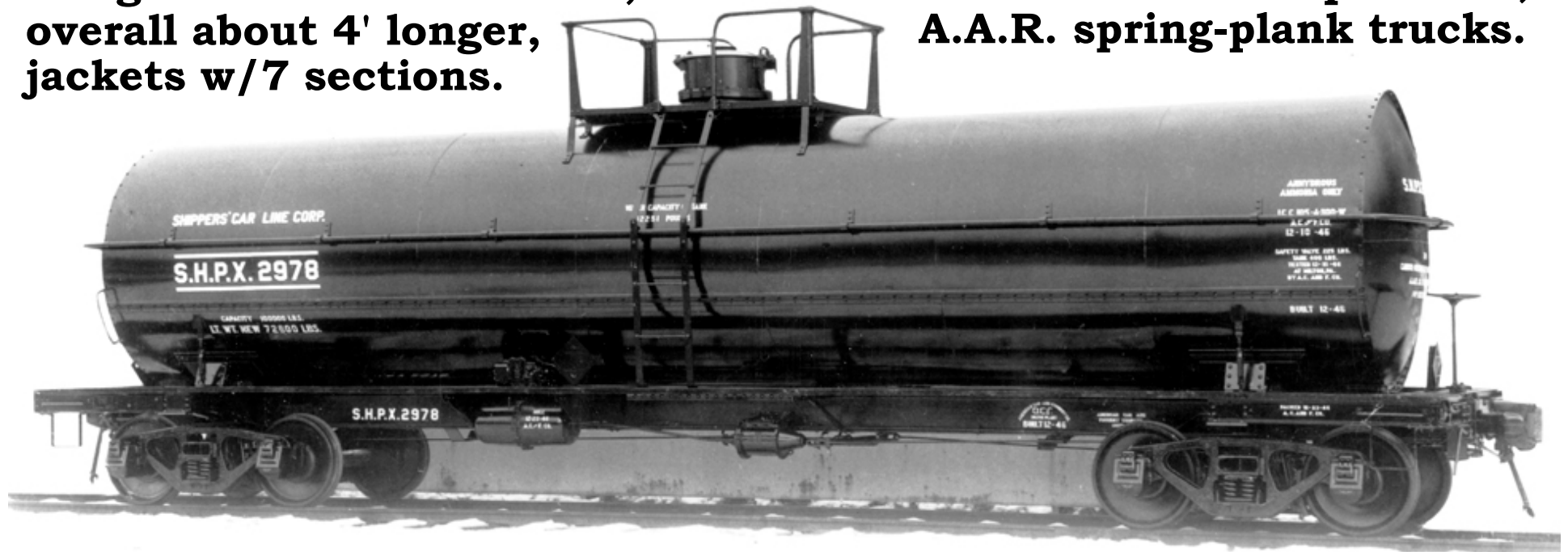
"A" dimension:
9'-8"
10'-0"
(as applicable)

SHPX 2976-3065, 12-46, Lot 3018

Earlier Longer 11,000-Gallon, ICC-105A, Type 27 Cars

For comparison, an earlier design - 85" tank diameter, overall about 4' longer, jackets w/7 sections.

Wood running boards, 7'-7" x 5'-0" dome platform, A.A.R. spring-plank trucks.



1,091 cars built, 32'-0" truck centers, a common Type 27 built 1940 to 1946.

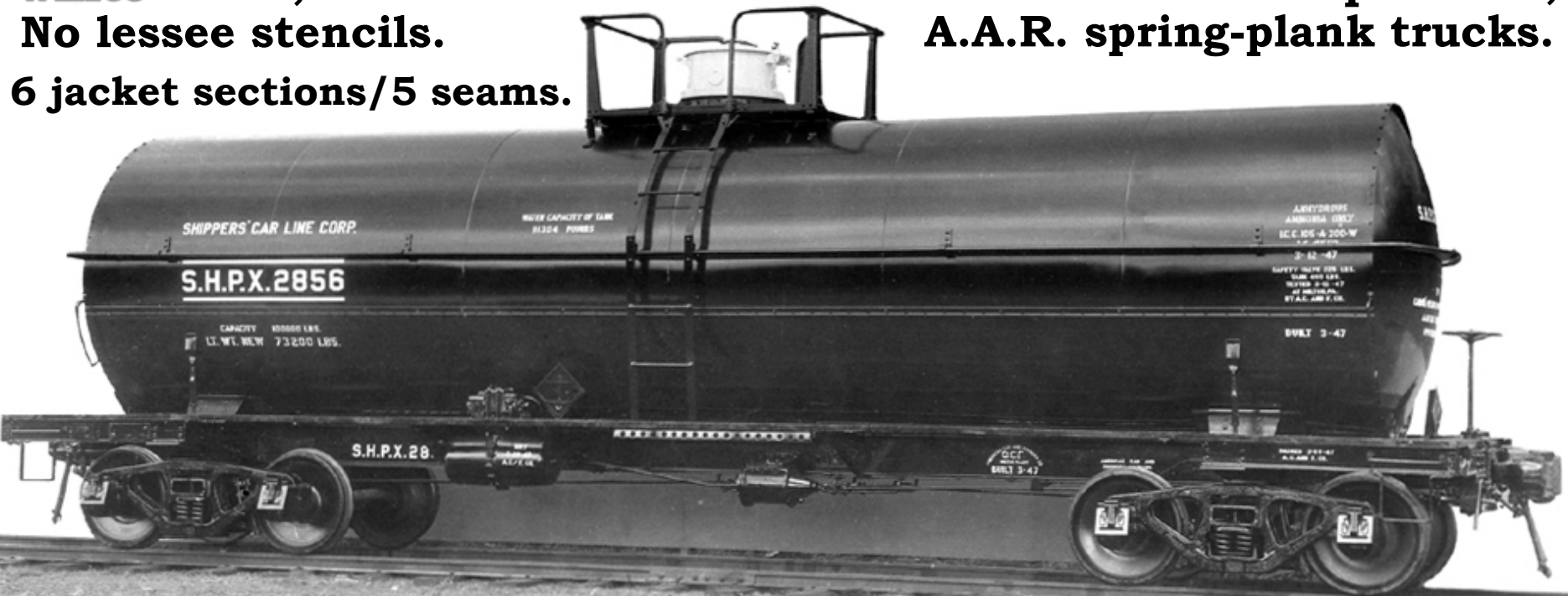
**Shippers' Car Line Corporation Dec. 23, 1946
A. C. And F. Co. Lot 3018 Neg. No. 172185-A-1**

SHPX 2856-2955 (100), 3-4/47, Lot 3083

Subgroup 2856-2869, 14 cars (ICC-105A300W)

**Black – entire car except dome;
white dome, white stencils.
No lessee stencils.**

**Wood running boards,
6'-2" x 4'-5" dome platform,
A.A.R. spring-plank trucks.**



Shippers' Car Line Corporation March 28, 1947
A. C. And F. Co. Lot 3083 Neg. No. 172195-A-I

Lot 3083 split with 64 cars 105A300W, 36 cars 105A400W.

White Dome Housings

Information courtesy of Dan Holbrook

- **Soon after World War II, cars of this general type in short supply**
- **A.A.R. issued directive to help combat the short supply**
- **Guidance no longer used after 1950**

Railway Age, January 25, 1947.

W.C. Kendall, Chairman of the Car Service Division of the A.A.R. has notified all roads.....whereby the dome of all such cars will be painted white by owners and shippers so that they may be distinguished and moved promptly.

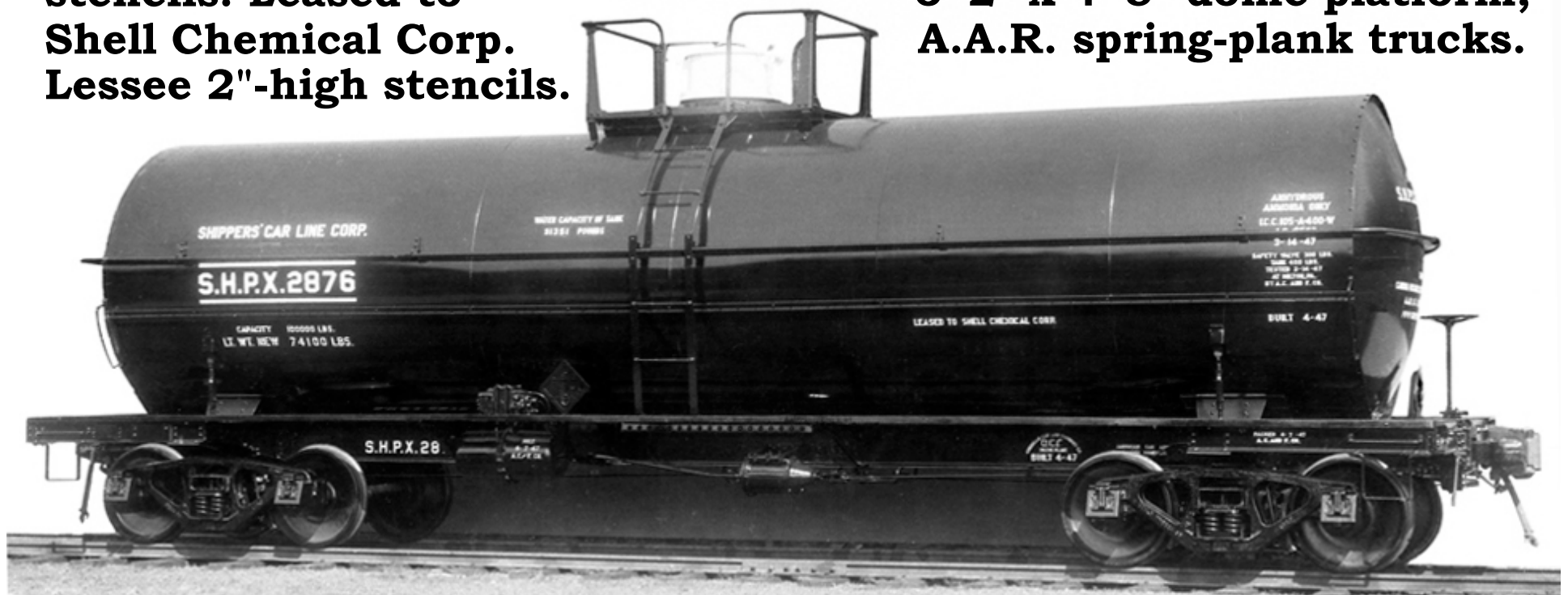
He added that painting the car domes white should facilitate ready identification, insure prompt handling of all loaded and empty cars and eliminate avoidable delays.

SHPX 2856-2955, 3-4/47, Lot 3083

Subgroup 2870-2879, 10 cars (ICC-105A400W)

Black & white paint; white stencils. Leased to Shell Chemical Corp. Lessee 2"-high stencils.

Wood running boards, 6'-2" x 4'-5" dome platform, A.A.R. spring-plank trucks.



Lot 3083 split with 64 cars 105A300W, 36 cars 105A400W.

**Shippers' Car Line Corporation April 8, 1947
A. C. And F. Co. Lot 3083 Neg. No. 172198-A-1**

SHPX 2786-2855 (70), 6-7/47, Lot 3084

Subgroup 2786-2941*, 7-47 (* unspecified)

Black & white paint; white stencils. Leased to Phillips Petroleum Co.

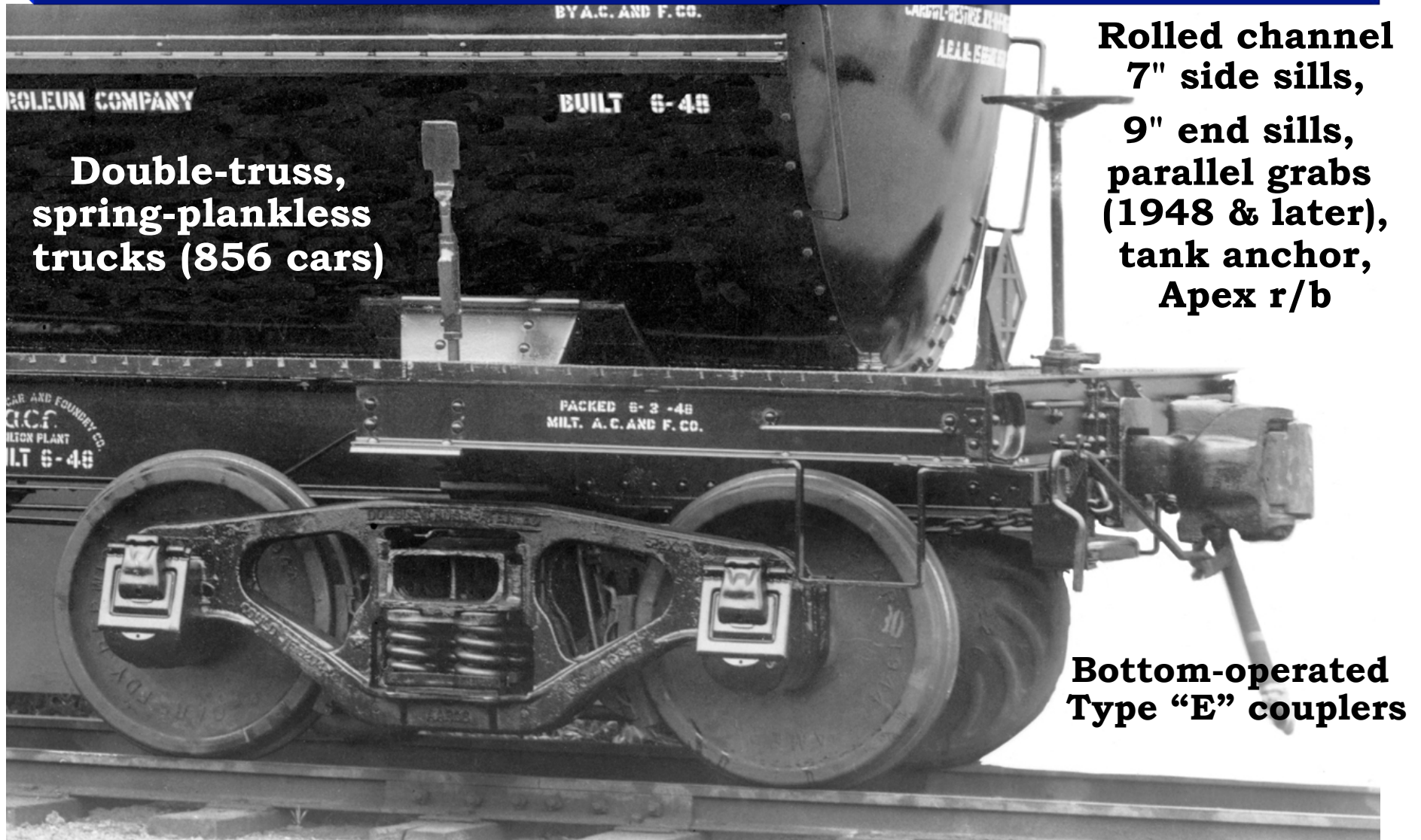
Wood running boards, 6'-2" x 4'-5" dome platform, A-3 Ride Control trucks.



All 70 cars 105A400W.

Shippers' Car Line Corporation July 8, 1947
A. C. And F. Co. Lot 3084 Neg. No. 172212-A-1

Features of ACF Type 27, 11,000-Gallon, ICC-105A Tank Cars Built 3-47 to 10-50



**Double-truss,
spring-plankless
trucks (856 cars)**

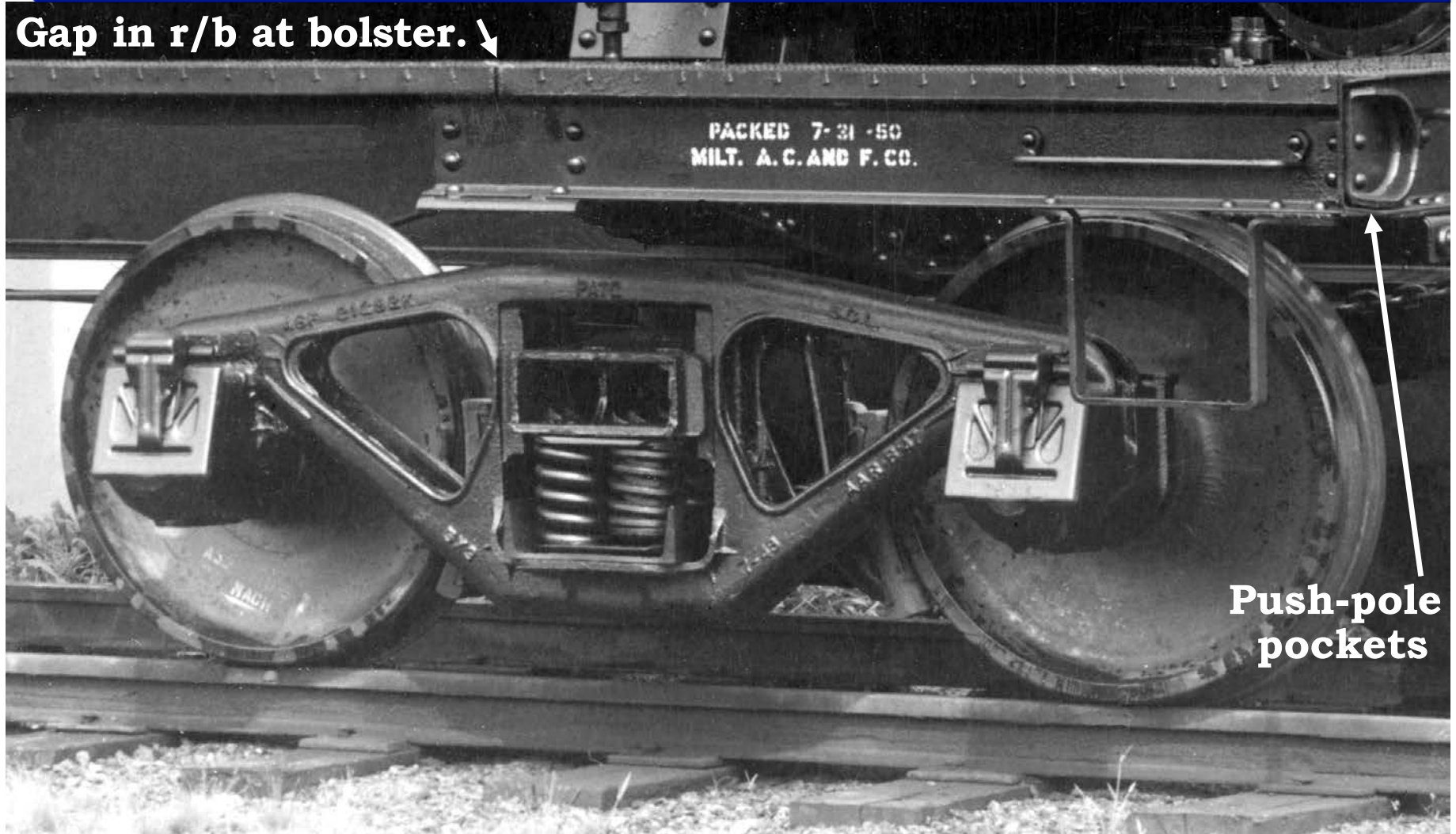
**Rolled channel
7" side sills,
9" end sills,
parallel grabs
(1948 & later),
tank anchor,
Apex r/b**

**Bottom-operated
Type "E" couplers**

A.A.R. Spring-Plank Trucks

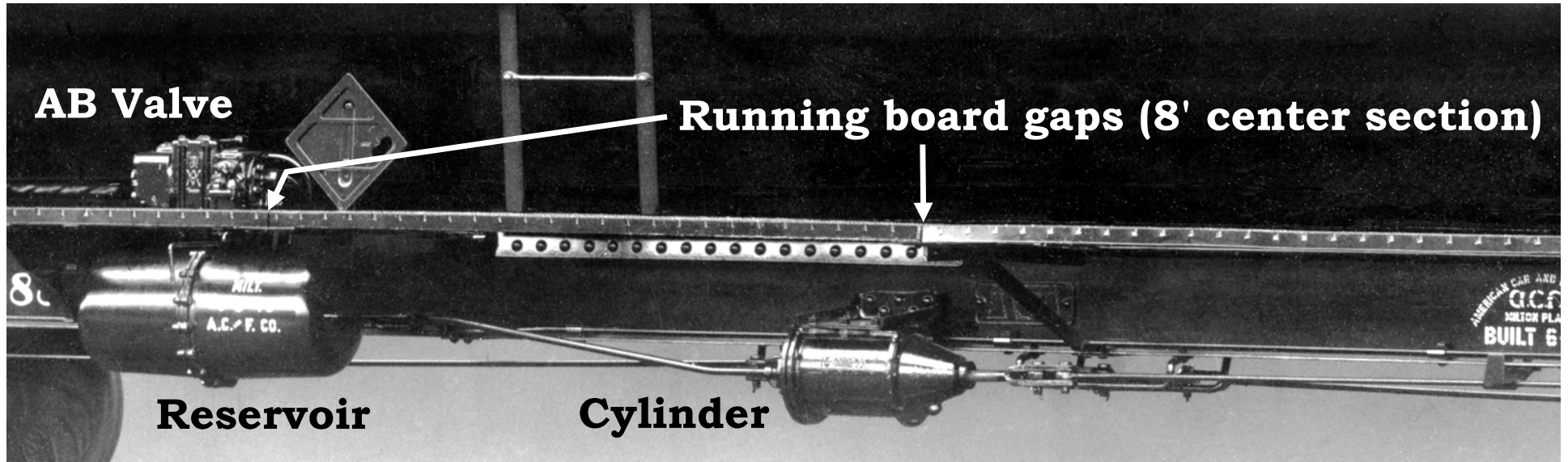
Equipped on 722 Cars Built 3-47 to 9-48

Gap in r/b at bolster. ↘



Push-pole
pockets

AB Brake Arrangement on All Cars



All 3 AB brake components on same side of center sill.

Side Dome Platforms and Ladders



1" x 8 13/32" x 4' Apex Tri-lok side platforms for 637 cars built starting in 7-47

2½" x ½" ladder stiles (16" inside width, 21" overall, shorter than on full-surround platform)

18" x 12" dome housing

Note the hand rail acts as a rung.

Full-Surround Dome Platforms and Side Ladders



**6'-6" x 4'-7" Apex Tri-lok full
platforms for 843 cars built
starting in 7-47**

2½" x 2½" side angles

Tapered angle corner brackets

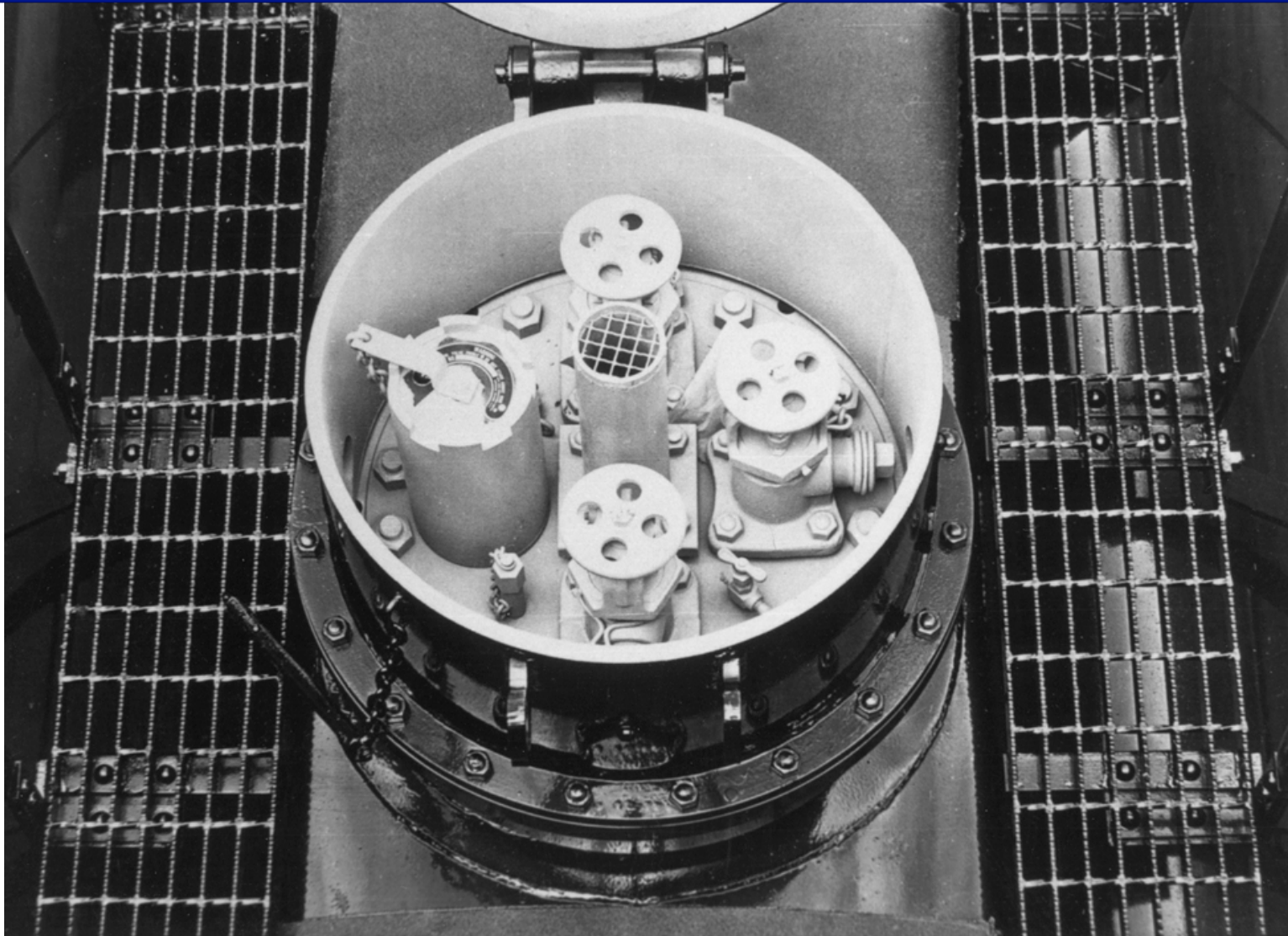
1¼" pipe (1.66") hand rails

**2½" x ½" ladder stiles
(16" inside width, 21" overall)**

18" x 12" dome housing

Dome Housing & Safety Valves

Likely 20" I.D., having Blaw-Knox platforms

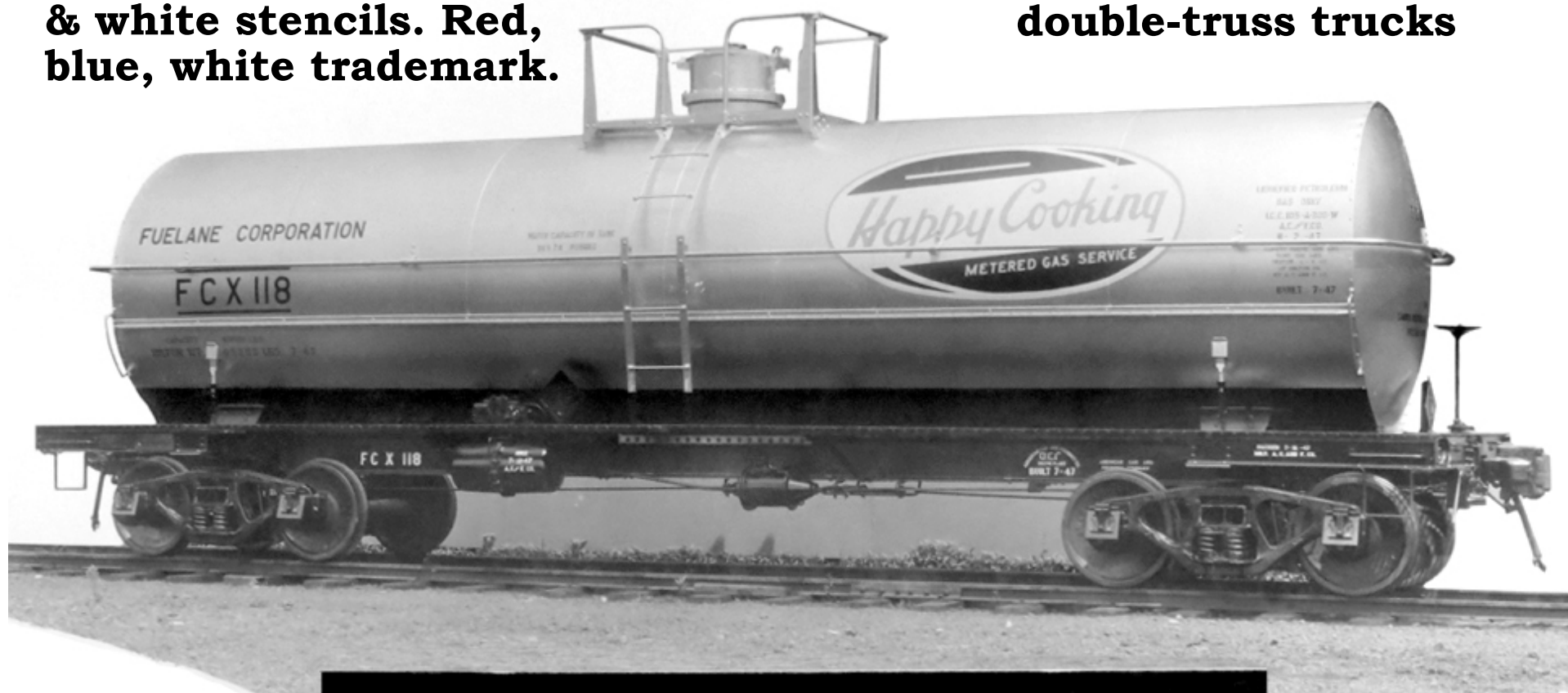


FCX 118-123, 7-47, Lot 3080

Fuelane Corp., Liberty, N.Y. (L.P.G.)

Aluminum upper jacket, dome;
Black lower section & u/f; black
& white stencils. Red,
blue, white trademark.

Apex running boards,
6'-6" x 4'-7" dome platform,
double-truss trucks



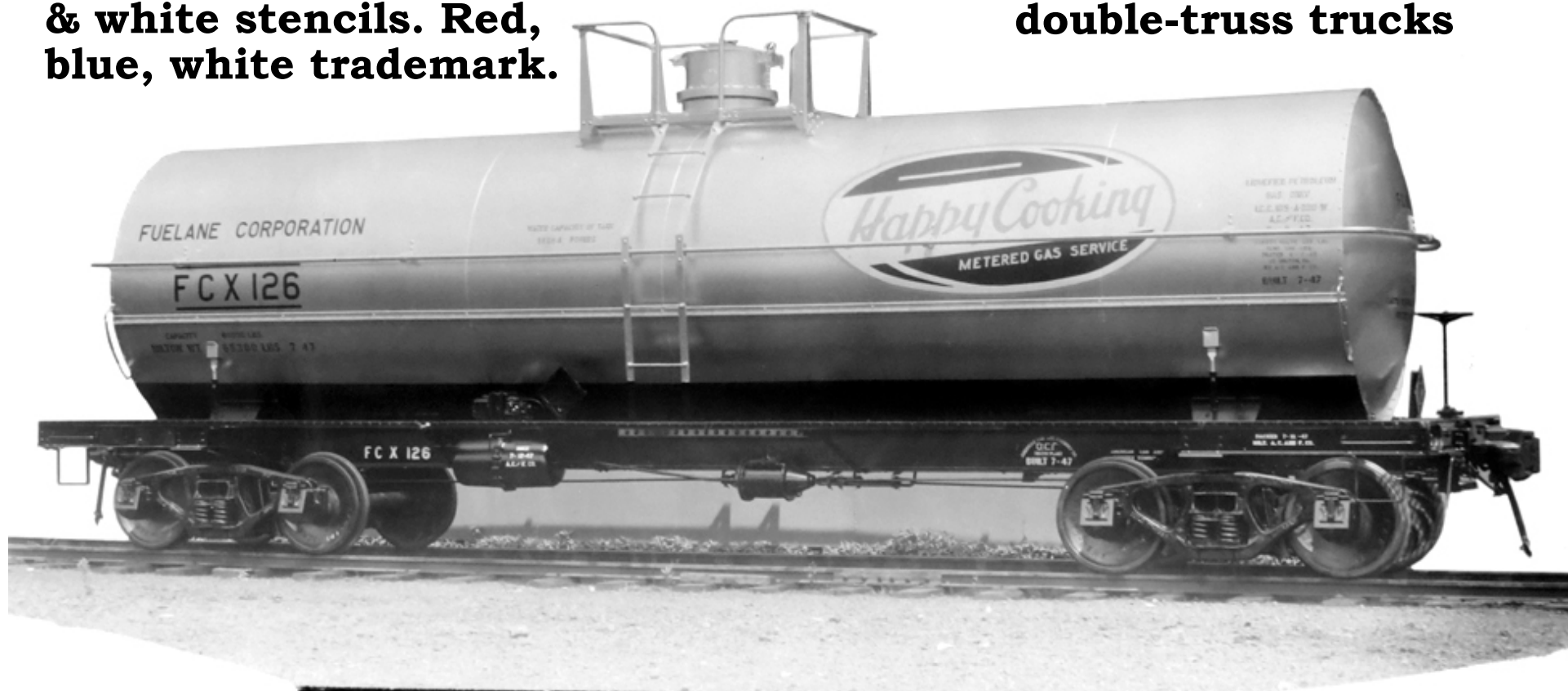
Fuelane Corporation July 12, 1947
A. C. And F. Co. Lot 3080 Neg. No. 172214-A-1

FCX 124-129, 7-47, Lot 3133

Fuelane Corp., Liberty, N.Y. (L.P.G.)

Aluminum upper jacket, dome;
Black lower section & u/f; black
& white stencils. Red,
blue, white trademark.

Apex running boards,
6'-6" x 4'-7" dome platform,
double-truss trucks



Fuelane Corporation

July 12, 1947

A. C. And F. Co. Lot 3133 Neg. No. 172213-A-I

PBGX 33-38, 9-47, Lot 3151
The Protane Corp., Erie, N.Y. (L.P.G.)

Black & white paint; white stencils.

**ORER listed cars thru
10/52, sold to RTCX
8633-8638 in 10-12/52.**

**6'-6" x 4'-7" dome platform,
double-truss trucks.**



GOPX 33-38, 9-47, Lot 3152

Gas-Oil Products, Inc., Oxford, Pa.

**Socony Orange upper jacket;
white dome; black lower section,
u/f, trim; black & white
stencils.**

**Apex 4' side dome platforms,
double-truss trucks.**



Gas-Oil Products, Inc. September 29, 1947
A. C. And F. Co. Lot 3152 Neg. No. 172239-A-I

SHPX 2546-2578 (33), 8-9/47, Lot 3163

Subclass 2546-2568, 8-47, 23 cars

**Black & white paint; white stencils.
Leased to The Barrett Division,
Allied Chemical &
Dye Corp.**

**6'-6" x 4'-7" dome platform,
A.A.R. spring-plank trucks.
For anhydrous ammonia.**



**Shippers' Car Line Corp.
A. C. And F. Co. Lot 3163**

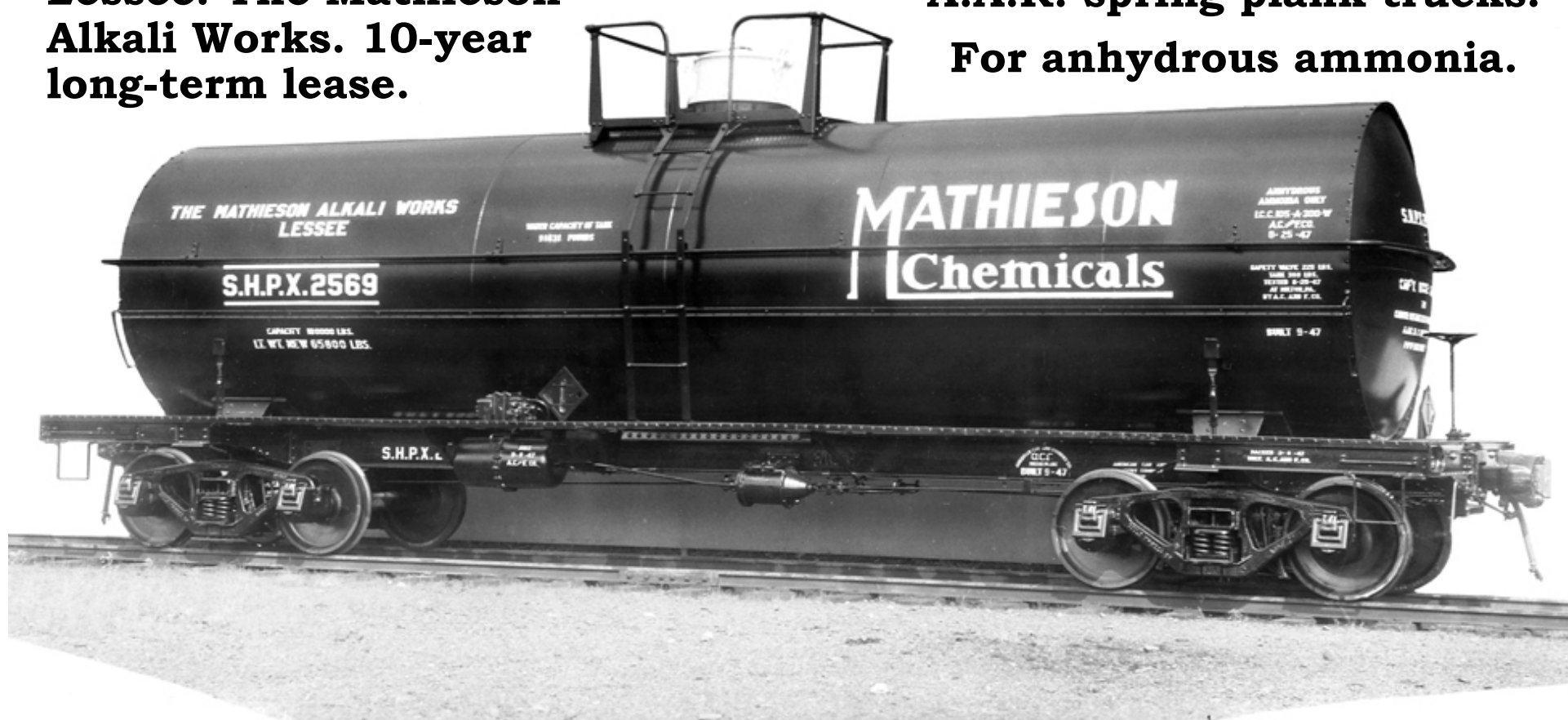
**August 29, 1947
Neg. No. 172231-A-1**

SHPX 2546-2578, 8-9/47, Lot 3163

Subclass 2569-2578, 9-47, 10 cars

**Black & white paint; white stencils.
Lessee: The Mathieson
Alkali Works. 10-year
long-term lease.**

**6'-6" x 4'-7" dome platform,
A.A.R. spring-plank trucks.
For anhydrous ammonia.**



Shippers' Car Line Corp.
A. C. And F. Co. Lot 3163

Sept. 8, 1947
Neg. No. 172234-A-1

SHPX 2579-2585 (7), 8-47, Lot 3163A Subclass 2579, 1 car (Ethylene Oxide)

**Black & white paint;
white stencils.
Leased to Wyandotte
Chemicals Corp.**

**6'-6" x 4'-7" dome platform,
A.A.R. spring-plank trucks.**



SHPX 2579-2585, 8-47, Lot 3163A

Subclass 2580-2585, 6 cars

**Black & white paint;
white stencils.
Leased to Sun Oil Co.
for L.P.G.**

**6'-6" x 4'-7" dome platform,
A.A.R. spring-plank trucks.**



Shippers' Car Line Corp. August 29, 1947
A. C. And F. Co. Lot 3163-A Neg. No. 172233-A-I

PGX 250-269, 10-47, Lot 3190 Pacific Gas Corp., Overton, Texas (?)

Aluminum upper jacket, dome;
black lower section, u/f, trim;
red, blue, gray, black,
white stencils.

6'-6" x 4'-7" dome platform,
double-truss trucks.

Reported in *ORER* thru 1/49,
sold to UTLX by 4/49.



Pacific Gas Corporation October 23, 1947
A. C. And F. Co. Lot 3190 Neg. No. 172243-A-I

SHPX 2466-2545 (80), 3-48, Lot 3168

Subclass 2466-2513* (* unspecified)

**Black & white paint; white
stencils. Leased to
Phillips Petroleum Co.
for L.P.G.**

**6'-6" x 4'-7" dome platform,
A.A.R. spring-plank trucks.**



Shippers' Car Line Corp.

March 4, 1948

A. C. And F. Co. TC 3168 Neg. No. 172269-A-1

SHPX 2466-2545, 3-48, Lot 3168

Subclass 2467-2538* (* unspecified)

Black & white paint; white stencils.
Lessee: Carbide and Carbon
Chemicals Corp. (Pyrofax Gas)

6'-6" x 4'-7" dome platform,
A.A.R. spring-plank trucks.



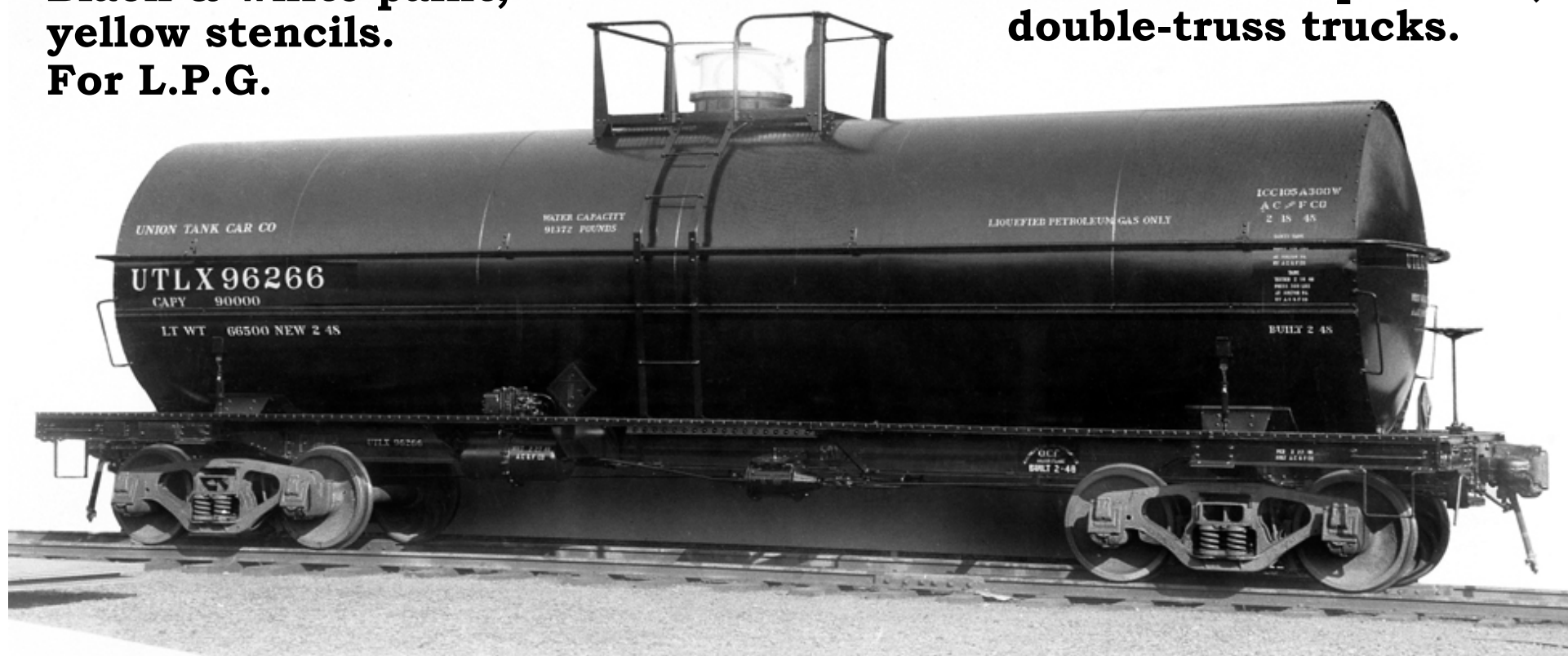
George Sisk photo, C. Winters collection, Kansas City, Mo. 1950

UTLX 96263-96272, 2-48, Lot 3169

Union Tank Car Co., UTLX Class Z5-300

**Black & white paint;
yellow stencils.
For L.P.G.**

**6'-6" x 4'-7" dome platform,
double-truss trucks.**



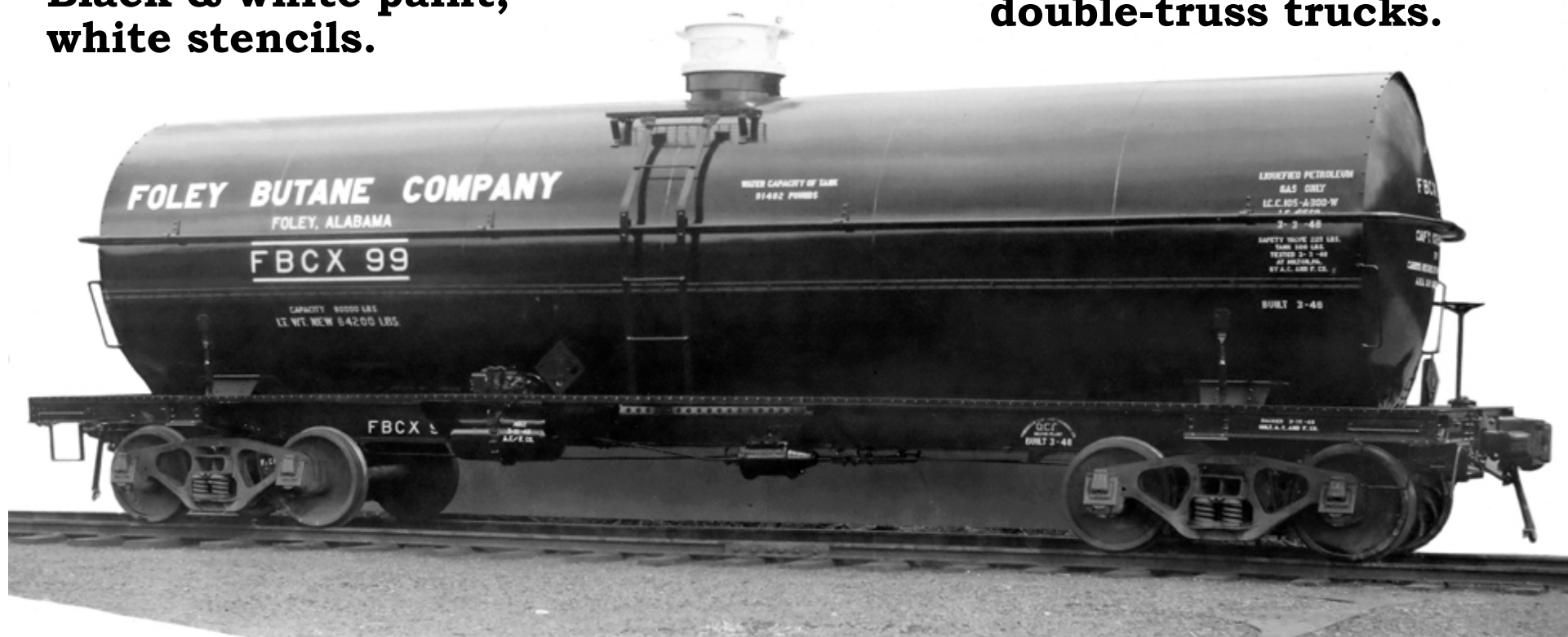
Union Tank Car Co. February 27, 1948
A. C. And F. Co. Lot 3169 Neg. No. 172266-A-1

FBCX 88/99, 3-48, Lot 3170

Foley Butane Co., Foley, Ala. (L.P.G.)

**Black & white paint;
white stencils.**

**Apex 4' side dome platforms,
double-truss trucks.**

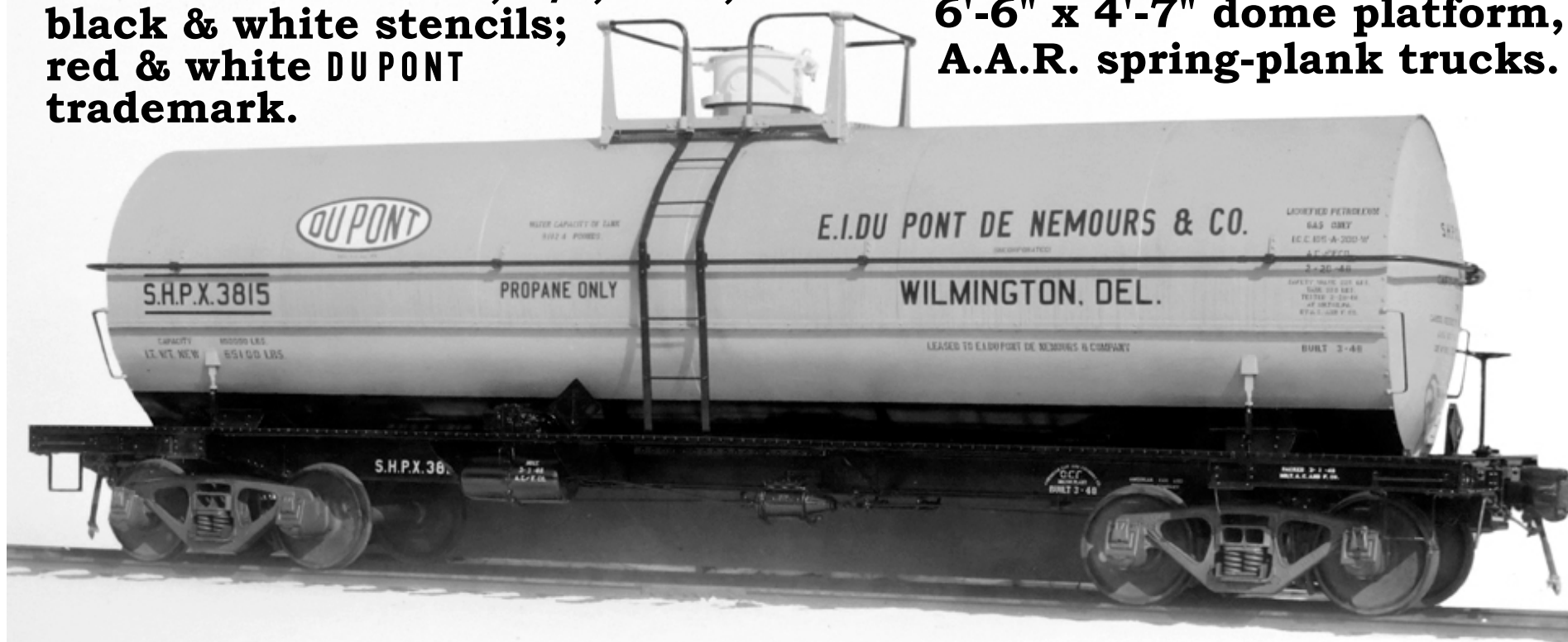


Foley Butane Co. March 16, 1948
A. C. And F. Co. TC 3170 Neg. No. 172276-A-I

SHPX 3815-3974 (160), 2-3/48, Lot 3171 Subclass 3815-3824, 3-48, 10 cars (L.P.G.)

**Du Pont Gray upper jacket; white dome;
black lower section, u/f, trim;
black & white stencils;
red & white DUPONT
trademark.**

**6'-6" x 4'-7" dome platform,
A.A.R. spring-plank trucks.**



**Shippers' Car Line Corp. March 4, 1948
A. C. And F. Co. TC 3171 Neg. No. 172268-A-I**

SHPX 3815-3974, 2-3/48, Lot 3171

Subclass 3845-3864, 2-48, 20 cars

**Black & white paint; white stencils.
Leased to Shell
Chemical Corp. for
anhydrous ammonia.**

**6'-6" x 4'-7" dome platform,
A.A.R. spring-plank trucks.**



Kadee model #9007.

**Shippers' Car Line Corp. February 11, 1948
A. C. And F. Co. Lot 3171 Neg. No. 172256-A-1**

SHPX 3865-3914 (50), 2-48, Lot 3171 Specification Summary (Bill of Materials)

FORM 1632

Lot 3171 No. Cars 50 Customer Shippers Car Line Corporation
Propane Tank Cars.
 Kind of Car Ty.27,I.C.C.105-A-300-W Capacity Lbs. 100,000 Capacity Gallons 11,000

Cars Lettered SHIPPERS CAR LINE CORP. Cars Numbered 3865 to 3914 INCLUSIVE
2" LETTERS(LEASED TO CARBIDE & Reporting Initials S.H.P.X.
(CARBON CHEM. CORP.)

Length over End Sills 38'-5-1/8" Buffers 38'-6-1/2"

Width over Side Sills 9'-6-9/16" Running Board 9'-8"

Height Rail to Top of Running Board 3'-8-5/8" Center of Draw Bar 2'-10-1/2"

Truck Wheel Base 5'-6" Track Gauge 4'-8-1/2"
long Over Heads.

Diam. of Tank 89-1/4" I.D. Length 35'-4-9/32" Diam. of Dome 18" I.D. x 12"

Weight, Body 14080 Trucks 14140 Tank 36793 Total 65013

Special Features Equipped with Cardwell-Westinghouse NY-11-F Draft Gears, Type "E"
6-1/4" x 8" Bottom Operating Couplers, AB-10" Air Brakes, AAR #3
Brake Beams. Ownership Plates to Dwg. 40286. Insulated with one layer of 4"
Fiberglas and covered with 3 piece 1/8" Steel Jacket. Tank tested to 300#

Hydrostatic Pressure.

Sidebar

Shippers' Car Line Corp. (S.H.P.X.)

- **Subsidiary of American Car & Foundry Co., started in mid-1920s**
 - **Tank car lease fleet analogous to GATX but much smaller at approximately 10,000 tank cars in Jan. 1951 (GATX nearly 4 times the SHPX fleet size)**
 - **Cars on 10-year lease rated company markings**
 - **Cars on short-term lease, 2" company-name stencils**
-
- **895 SHPX tank cars built to specs discussed & matching the Kadee model (170 wood/725 Apex running boards)**
 - **All cars full-surround dome platforms**
 - **18 different lessees, 7 long term, many multiple groups**

SHPX 3815-3974, 2-3/48, Lot 3171

Subclass 3915-3937, 2-48, 23 cars

**Black & white paint; white stencils.
Lessee: General Gas Corp.,
Baton Rouge, La.
for L.P.G.**

**6'-6" x 4'-7" dome platform,
A.A.R. spring-plank trucks.**



**Shippers' Car Line Corp. February 17, 1948
A. C. And F. Co. Lot 3171 Neg. No. 172258-A-1**

HGCX 63, 4-48, Lot 3177

The Home Gas Corp., Palmer, Mass.

Du Pont Gray upper jacket; white dome;
black lower section, u/f, trim;
black & white stencils;
red & white HOMGAS
trademark.

6'-6" x 4'-7" dome platform,
A.A.R. spring-plank trucks.



The Home Gas Corporation April 12, 1948
A. C. And F. Co. TC 3177 Neg. No. 172288-A-1

HGCX 214/978, 4-48, Lot 3177

The Home Gas Corp., Housatonic, Mass.

Du Pont Gray upper jacket; white dome;
black lower section, u/f, trim;
black & white stencils;
red & white HOMGAS
trademark.

6'-6" x 4'-7" dome platform,
A.A.R. spring-plank trucks.



The Home Gas Corporation April 12, 1948
A. C. And F. Co. TC 3177 Neg. No. 172289-A-1

ABX 189, 4-48, Lot 3179

Adirondack Bottled Gas Corp., NYH&H RR, Dutchess County, N.Y.

Du Pont Gray upper jacket; white dome;
black lower section, u/f, trim;
black & white stencils;
red & white HOMGAS
trademark.

6'-6" x 4'-7" dome platform,
A.A.R. spring-plank trucks.



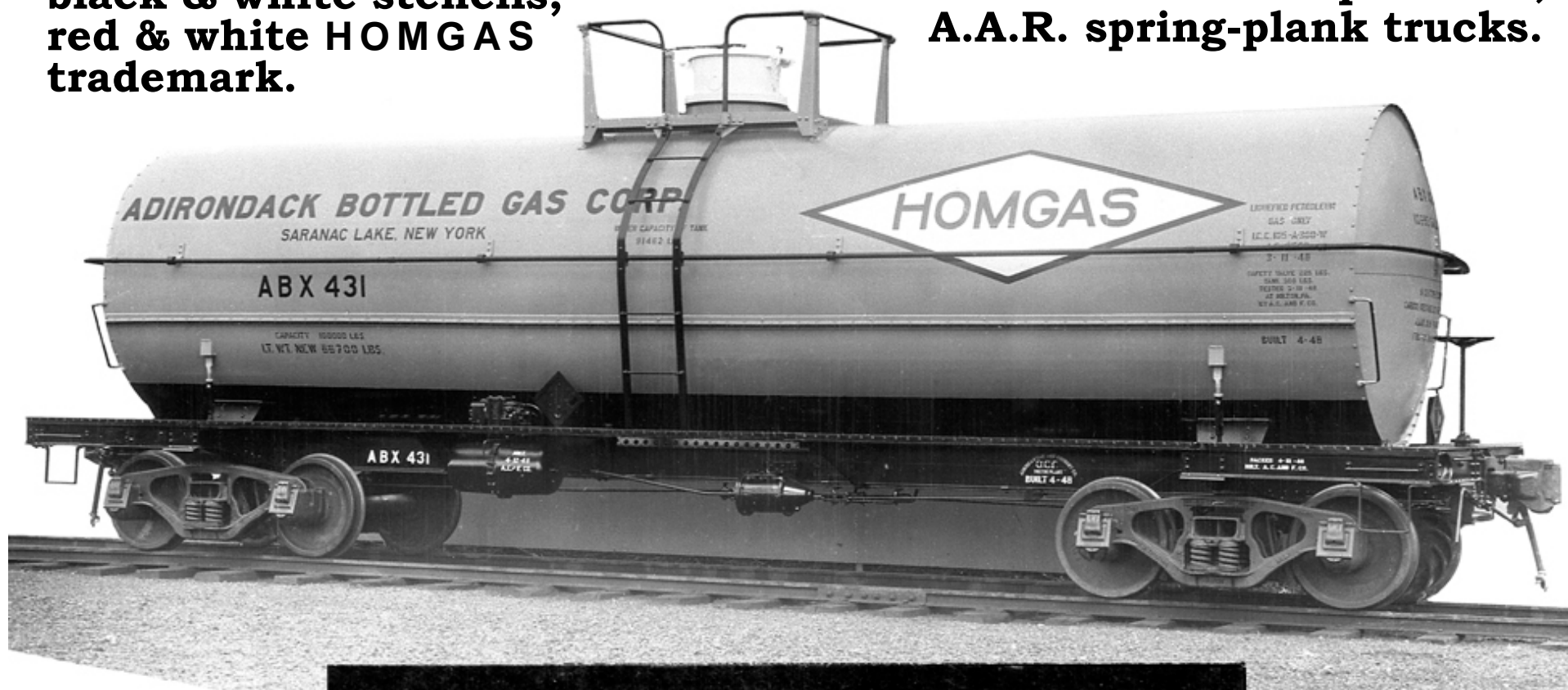
Adirondack Bottled Gas Corp. April 12, 1948
A. C. And F. Co. TC 3179 Neg. No. 172292-A-1

ABX 431, 4-48, Lot 3179

Adirondack Bottled Gas Corp., Saranac Lake, N.Y.

Du Pont Gray upper jacket; white dome;
black lower section, u/f, trim;
black & white stencils;
red & white HOMGAS
trademark.

6'-6" x 4'-7" dome platform,
A.A.R. spring-plank trucks.



Adirondack Bottled Gas Corp. April 12, 1948
A. C. And F. Co. TC 3179 Neg. NO. 172290-A-1

ABX 5645, 4-48, Lot 3179

Adirondack Bottled Gas Corp., Hudson Falls, N.Y.

**Du Pont Gray upper jacket; white dome;
black lower section, u/f, trim;
black & white stencils;
red & white HOM GAS
trademark.**

**6'-6" x 4'-7" dome platform,
A.A.R. spring-plank trucks.**



**Adirondack Bottled Gas Corp. April 12, 1948
A. C. And F. Co. TC 3179 Neg. No. 172291-A-1**

RTCX 4886-4887, 4-48, Lot 3180 Republic Tank Car Co. (L.P.G.)

**Black & white paint; white stencils.
Leased to Pacific Gas Corp.**

**6'-6" x 4'-7" dome platform,
double-truss trucks.**



Conservative Gas Corp. April 5, 1948
A. C. And F. Co. TC 3180 Neg. No. 172286-A-1

DGX 100/110, 5-48, Lot 3195

Dade Gas Co. (to ANPX 2580/2590 in 7-9/48)

Aluminum upper jacket; white dome(?);
black lower section, u/f,
trim; black & white
stencils.

6'-6" x 4'-7" dome platform,
double-truss trucks.



Dade Gas Corp. May 26, 1948
A.C. And F. Co. TC 3195 Neg. No. 172308-A-1

UTLX 96291-96296, 5-48, Lot 3225 Union Tank Car Co., UTLX Class Z5-300

**Black & white paint;
yellow stencils.
For L.P.G.**

**Apex 4' side dome platforms,
double-truss trucks.**



Union Tank Car Co. April 1, 1948
A. C. And F. Co. TC 3225 Neg. No. 172285-A-I

CGAX 8601-8602, 5-48, Lot 3234 Cumberland Gasoline Corp. (L.P.G.)

**Black & white paint;
white stencils.**

**6'-6" x 4'-7" dome platform,
double-truss trucks.**



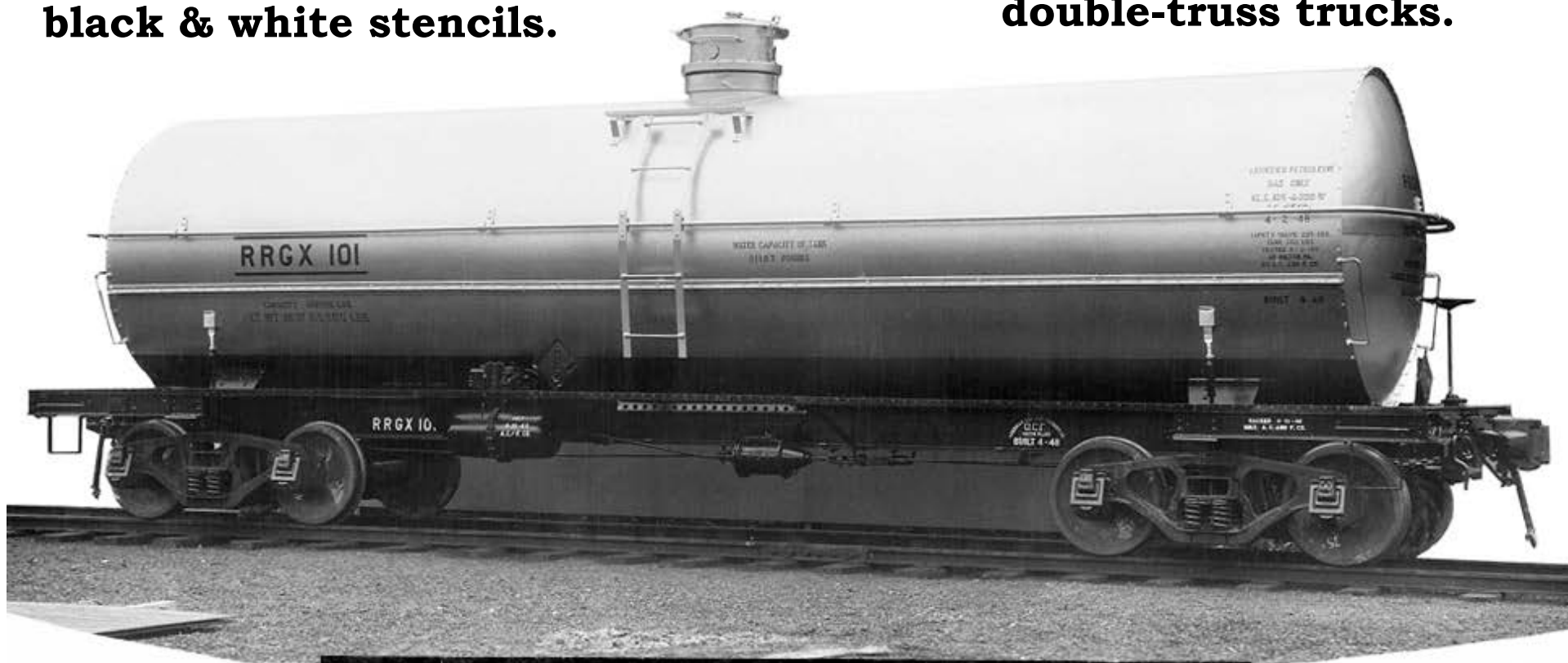
Cumberland Gasoline Corp. May 5, 1948
A.C. And F. Co. TC 3234 Neg.No. 172298-A-1

RRGX 101-104, 4-48, Lot 3244

Ryan Ruralgas Co. (to ANPX 2630-2660 7-9/48)

**Aluminum upper jacket, dome, trim;
black lower section, u/f, trim;
black & white stencils.**

**Apex 4' side dome platforms,
double-truss trucks.**



Ryan Ruralgas Co., Inc. April 27, 1948
A. C. And F. Co. TC 3244 Neg. No. 172297-A-1

ANPX 2630-2660 (by 10s) ex-RRGX 101-104, 4-48, Lot 3244

Original paint. New Anchor stencils applied, areas painted over for ANPX 2660. Cars sold to Anchor Petroleum in 7-9/48.

**George Sisk photo,
C. Winters collection, 1949.**



SHPX 1700-1799 (100), 3-4/48, Lot 3257

Subgroup 1700-1719, 3-48, 20 cars

**Black & white paint; white stencils.
Leased to The Barrett
Division Allied
Chemical & Dye Corp.**

**6'-6" x 4'-7" dome platform,
A.A.R. spring-plank trucks.
For anhydrous ammonia.**



Shippers' Car Line Corp. March 25, 1948
A. C. And F. Co. Lot 3257 Neg. No. 172279-A-I

SHPX 1700-1799, 3-4/48, Lot 3257

Subgroup 1750-1799, 4-48, 50 cars

**Black & white paint; white stencils.
Warren Petroleum Co.
long-term lease.**

**6'-6" x 4'-7" dome platform,
A.A.R. spring-plank trucks.**



Shippers' Car Line Corp. April 26, 1948
A. C. And F. Co. TC 3257 Neg. No. 172295-A-1

SHPX 2022-2071, 6-48, Lot 3268

Subgroup 2022-2051, 30 cars (L.P.G.)

**Aluminum top jacket section, dome;
black lower jacket, u/f, trim;
black & white stencils.
Lessee: Sunray Oil
Corp., Sunray, Texas.**

**6'-6" x 4'-7" dome platform,
double-truss trucks.
May have changed to
Anchor ca. 1954.**



Shippers' Car Line Corp. June 21, 1948
A. C. And F. Co. TC 3268 Neg. No. 172326-A-1

SHPX 2022-2071, 6-48, Lot 3268

Subgroup 2052-2071, 20 cars (L.P.G.)

**Black & white paint; white stencils.
Leased to Carbide and Carbon
Chemicals Corp.**

**6'-6" x 4'-7" dome platform,
double-truss trucks.**



Shippers' Car Line Corp. June 23, 1948
A. C. And. F. Co. TC 3268 Neg. No. 172327-A-1

FCX 130-135, 5-48, Lot 3288 Fuelane Corp., Liberty, N.Y. (L.P.G.)

Aluminum upper jacket, dome;
Black lower section & u/f; black
& white stencils. Red,
blue, white trademark.

6'-6" x 4'-7" dome platform,
double-truss trucks.



SHPX 3550-3599 (50), 8-48, Lot 3289

Subgroup 3550-3560* (* unspecified)

Black & white paint; white stencils.

Lessee: Texas Natural Gasoline Corp., Tulsa, Okla.

Kadee model #9006.

ICC-105A400W

**6'-6" x 4'-7" dome platform,
A.A.R. spring-plank trucks.**



Shippers' Car Line Corp.

Aug. 31, 1948

A. C. And F. Co. TC 3289 Neg. No. 172354-A-1

SHPX 3750-3799 (50), 8-48, Lot 3289 Became Olin Mathieson Chemical Corp. in 1954

**Black & white paint; white stencils.
Lessee: Mathieson
Chemical Corp.**

**ICC-105A400W
6'-6" x 4'-7" dome platform,
A.A.R. spring-plank trucks.**



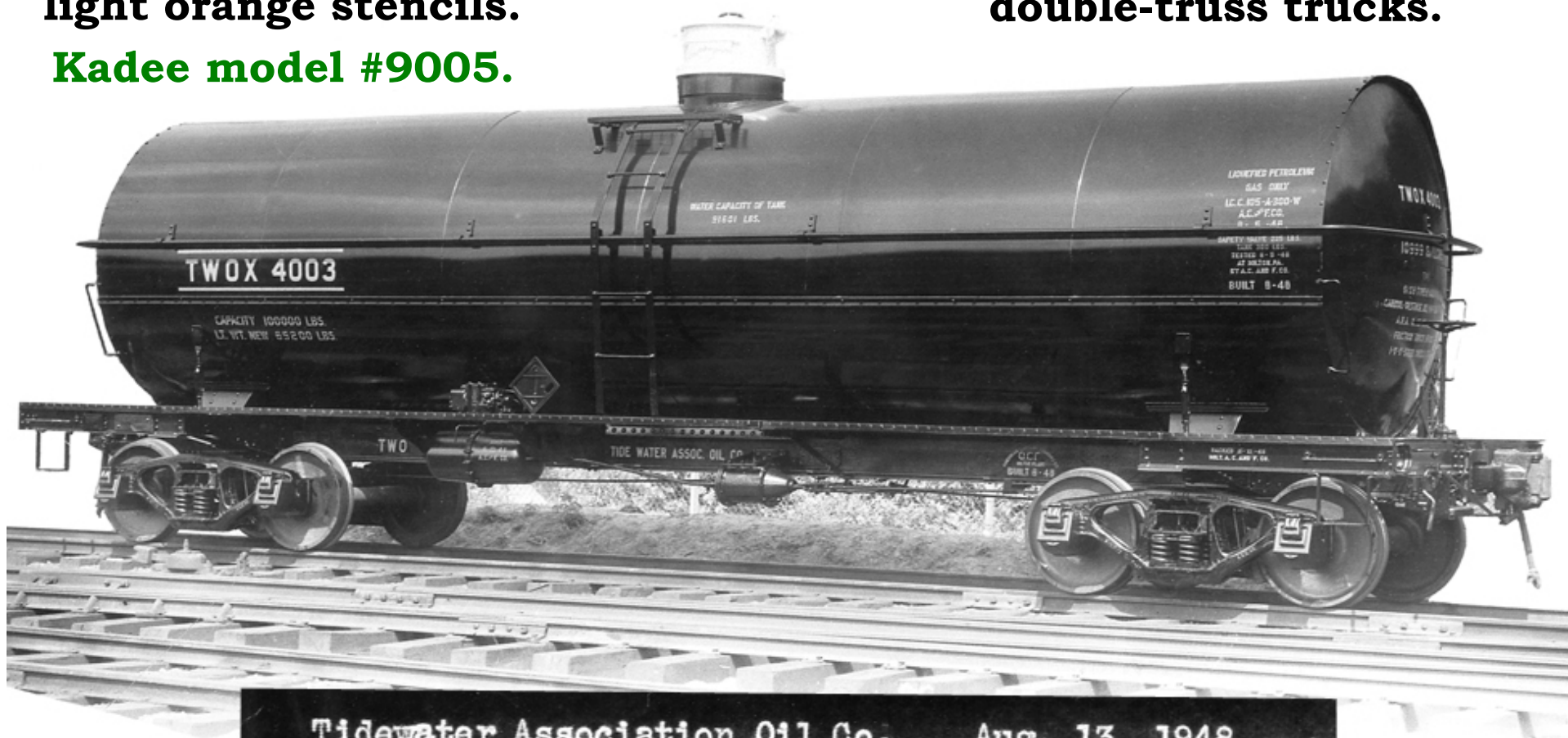
**Shippers' Car Line Corp. Aug. 30, 1948
A. C. And F. Co. TC 3289 Neg. No. 172353-A-1**

TWOX 4001-4005, 8-48, Lot 3301 Tidewater Association Oil Co. (L.P.G.)

**Black & white paint;
light orange stencils.**

Kadee model #9005.

**Apex 4' side dome platforms,
double-truss trucks.**



Tidewater Association Oil Co. Aug. 13, 1948
A. C. And F. Co. TC 3301 Neg. No. 172347-A-1

TGCX 100, 8-48, Lot 3304 Tank Gas Corp., Schenectady, N.Y.

Black & white paint;
white stencils.

6'-6" x 4'-7" dome platform,
double-truss trucks.

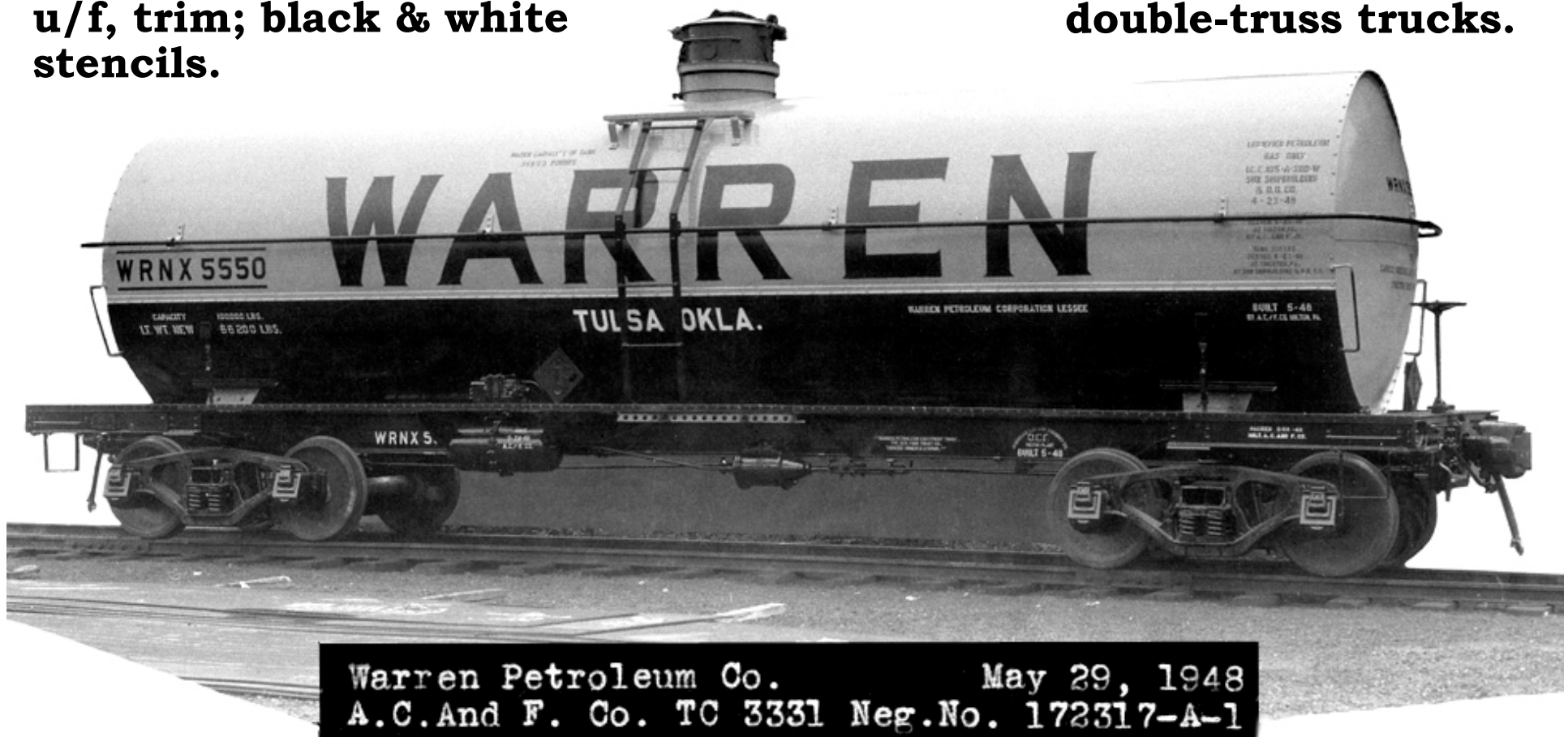


Tank Gas Corporation May 15, 1948
A.C. And F. Co. TC 3304 Neg. No. 172306-A-1

**WRNX 5550-5790 (25, by 10s ending 0)/
6955-8695 (175, by 10s ending 5)
5-48, Lot 3331, Warren Petroleum Co.**

**Allied Gray upper jacket, Shamrock
Green dome, black bottom jacket,
u/f, trim; black & white
stencils.**

**Apex 4' side dome
platforms,
double-truss trucks.**

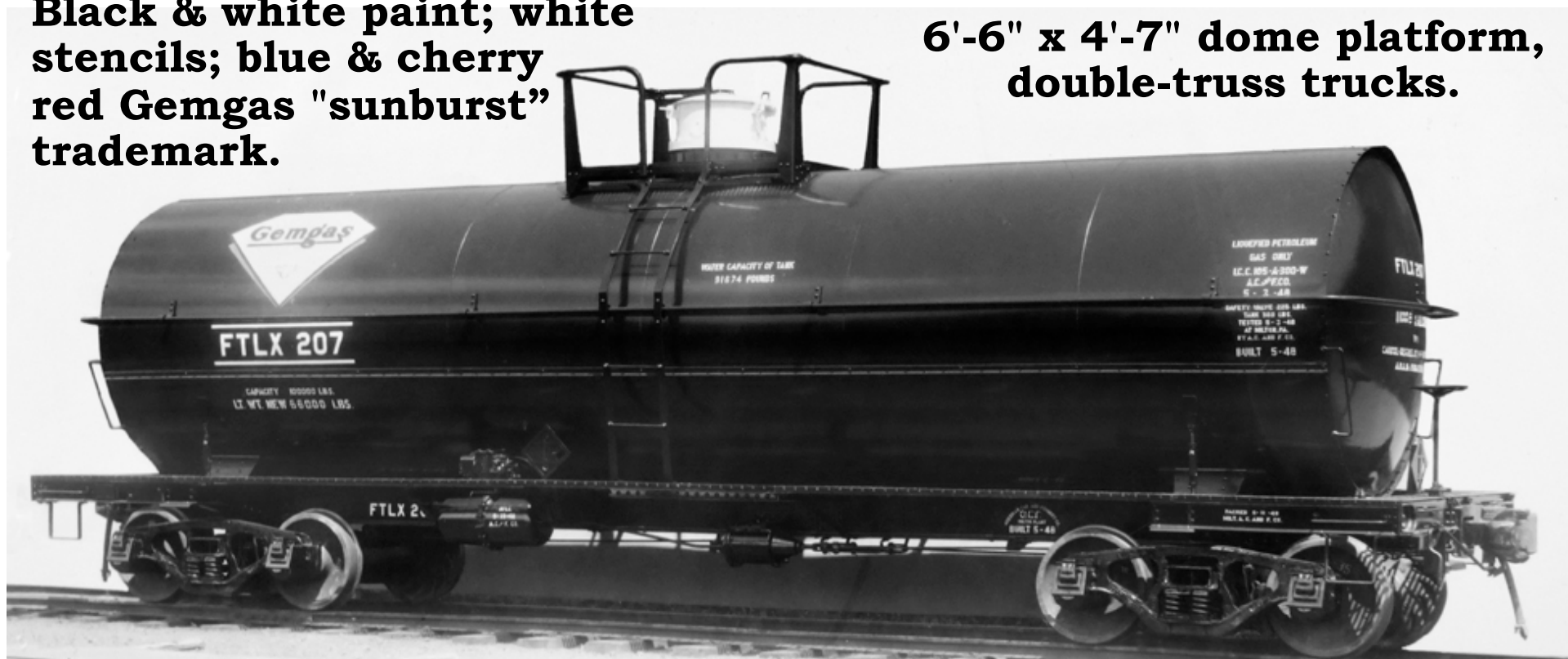


FTLX 200-209, 5-48, Lot 3340

Gem Automatic Gas Co. (Fagan Tank Line)

Black & white paint; white stencils; blue & cherry red Gemgas "sunburst" trademark.

6'-6" x 4'-7" dome platform, double-truss trucks.



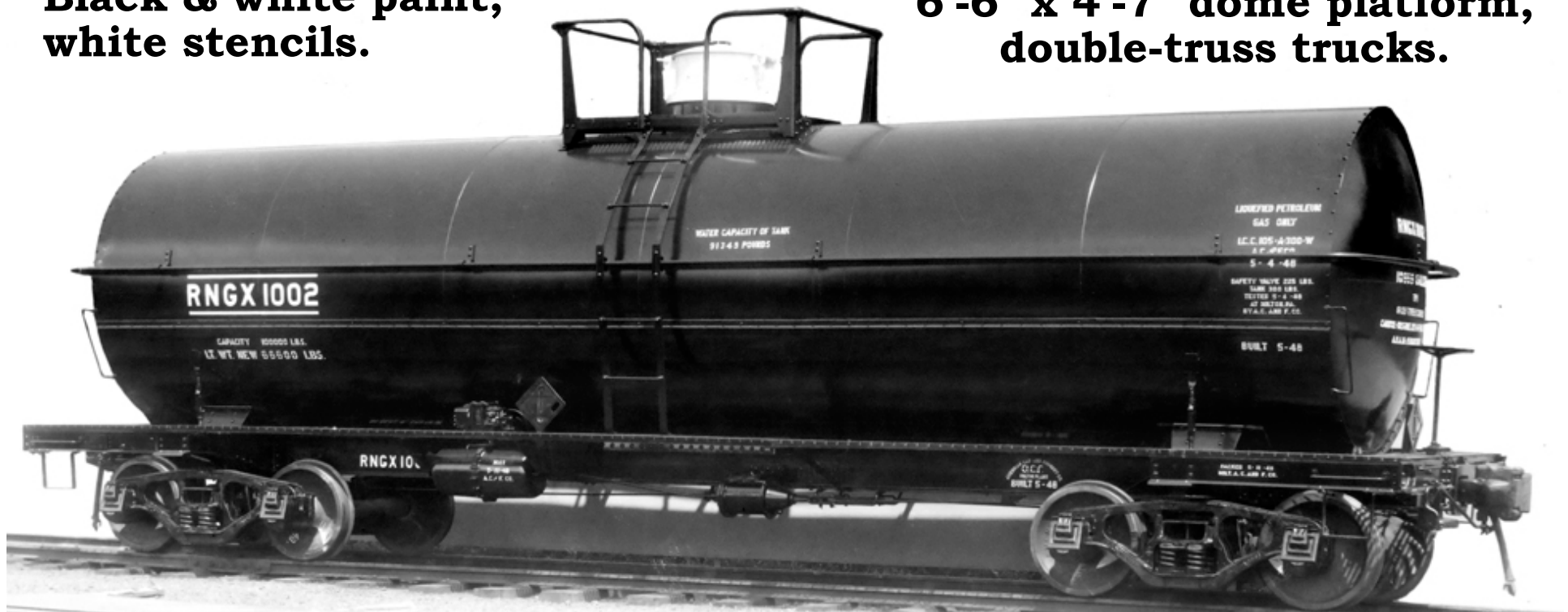
Home points Houston & Longview, Texas
In ORER thru 10/50. New owner?

Gem Automatic Gas Co. May 15, 1948
A.C. And F. Co. TC 3340 Neg. No. 172304-A-1

RNGX 1001-1008, 5-48, Lot 3344 The Rural Natural Gas Co., Ludlow, Ky.

Black & white paint;
white stencils.

6'-6" x 4'-7" dome platform,
double-truss trucks.



The Rural Natural Gas Co. May 15, 1948
A.C. And F. Co. TC 3344 Neg. No. 172305-A-1

RTCX 4851-4885 (35 cars), 5-6/48, Lot 3345 Republic Tank Car Co. (various lessees)

The lease stencilling to be applied to the cars on the above order will be in accordance with the following:

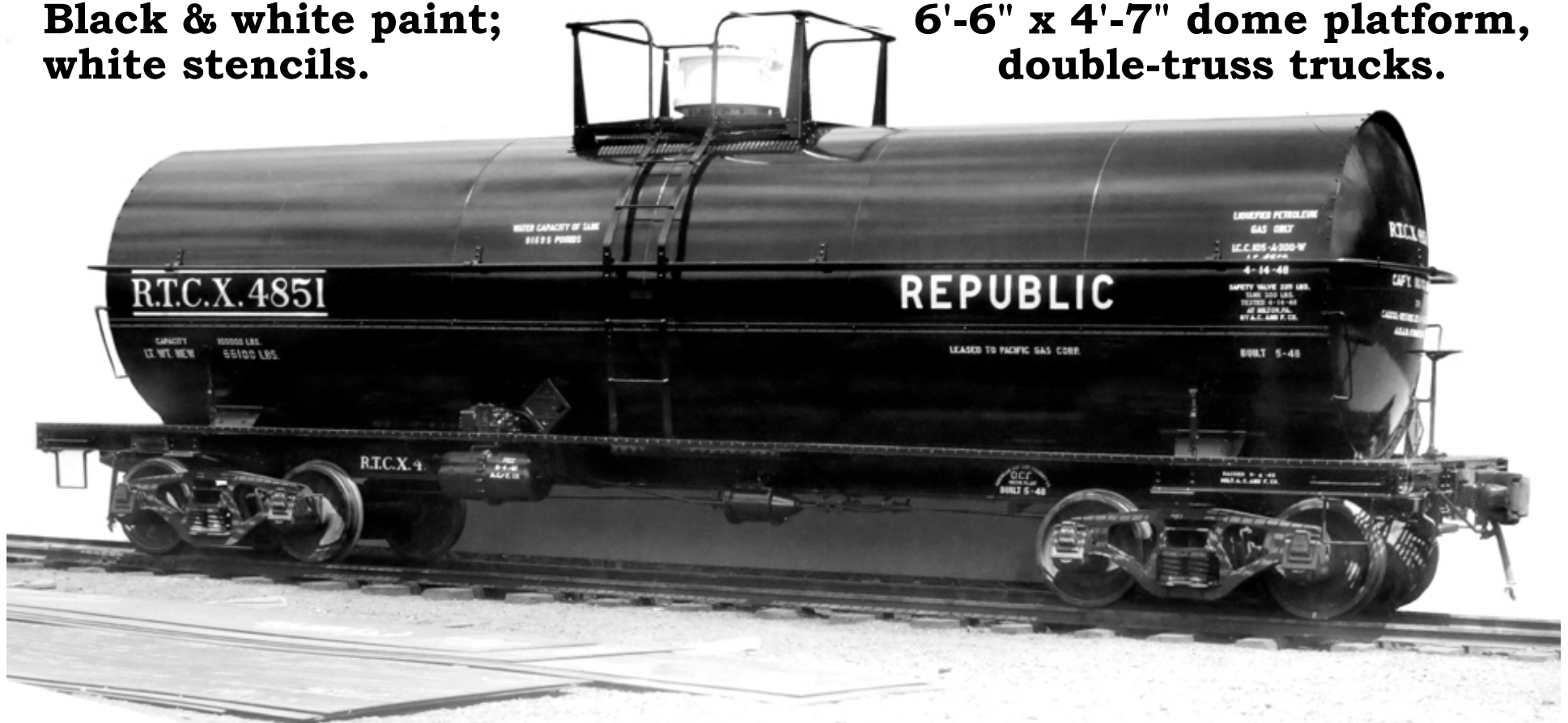
RTCX 4851 to 4854 inclusive	- Leased to Pacific Gas Corp.
RTCX 4855 to 4856	- Leased to Flamex Corporation.
RTCX 4857 to 4861 inclusive	- Leased to Pacific Gas Corp.
RTCX 4862 to 4866 inclusive	- Leased to Bottled Gas Corporation of Virginia
RTCX 4867 to 4869 inclusive	- Leased to Beacon Petroleum Co.
RTCX 4870	- Leased to Pacific Gas Corp.
RTCX 4871	- Leased to Flamex Corp.
RTCX 4872 to 4885 inclusive	- Leased to Beacon Petroleum Co.

Cars numbered RTCX 4862 to 4866 inclusive will be lettered in accordance with stencilling diagram which is being prepared, all other cars will be lettered in accordance with shop letter.

RTCX 4851-4854/4857-4861/4870, 5-48, Lot 3345 10 cars leased to Pacific Gas Corp.

**Black & white paint;
white stencils.**

**6'-6" x 4'-7" dome platform,
double-truss trucks.**



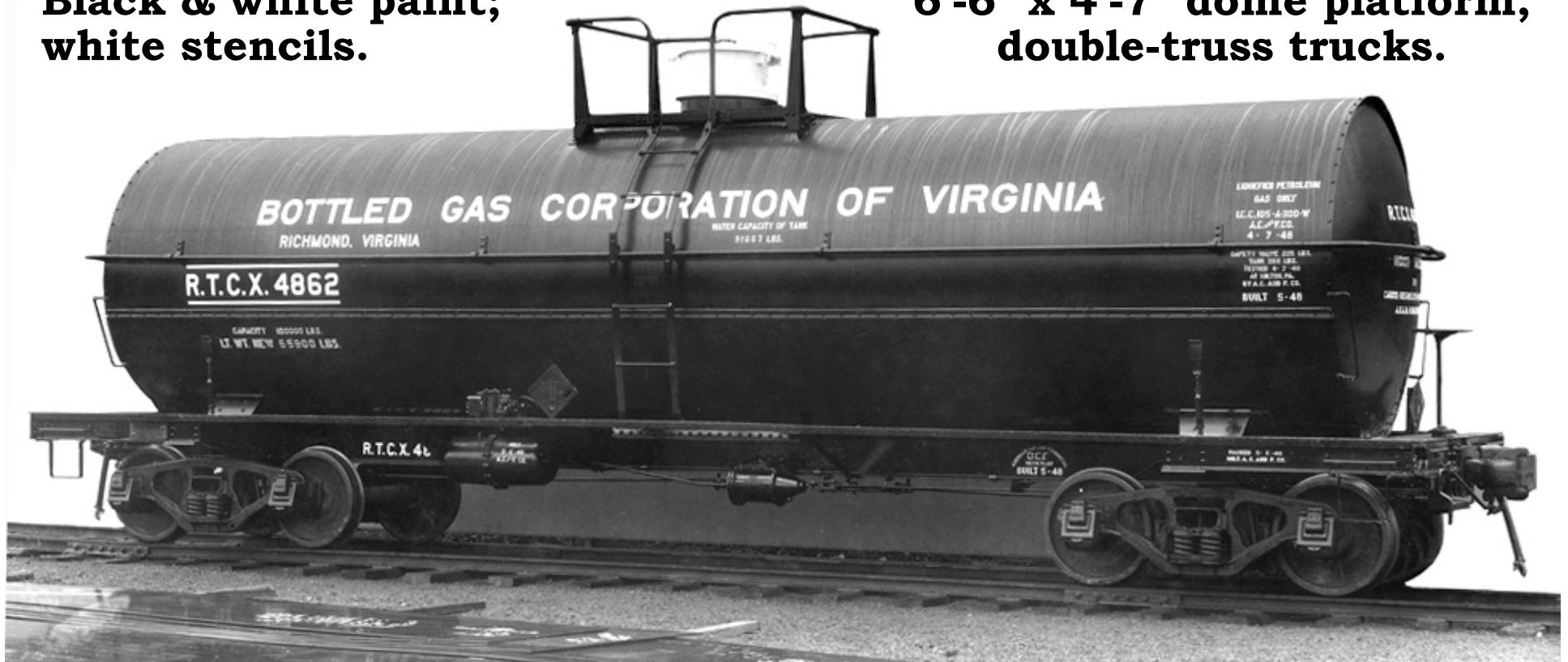
Conservative Gas Corp. May 6, 1948
A.C. And F. Co. TC 3345 Neg.No. 172299-A-1

RTCX 4862-4866, 5-48, Lot 3345

5 cars leased to Bottled Gas Corp. of Virginia

**Black & white paint;
white stencils.**

**6'-6" x 4'-7" dome platform,
double-truss trucks.**



Company located in Richmond, Virginia.

RTCX 4867-4869/4872-4885, 6-48, Lot 3345 17 cars leased to Beacon Petroleum Company

**Black & white paint;
white stencils.**

**6'-6" x 4'-7" dome platform,
double-truss trucks.**



Conservative Gas Corp. June 3, 1948
A.C. And F. Co. TC 3345 Neg. No. 172319-A-1

SHPX 1800-1941 (142), 8-9/48, Lot 3365

Subgroup 1800-1904, 8-48, 105 cars

**Black & white paint; white stencils.
Leased to Phillips
Petroleum Co.**

**6'-6" x 4'-7" dome platform,
double-truss trucks.**



Shippers' Car Line Corp. Aug. 17, 1948
A. C. And F. Co. TC 3365 Neg. No. 172348-A-1

SHPX 1800-1941, 8-9/48, Lot 3365

Subgroup 1933-1941, 9-48, 9 cars

**Black & white paint; white stencils.
Lessee: Texas Natural
Gasoline Corp.,
Tulsa, Oklahoma.**

**6'-6" x 4'-7" dome platform,
double-truss trucks.**



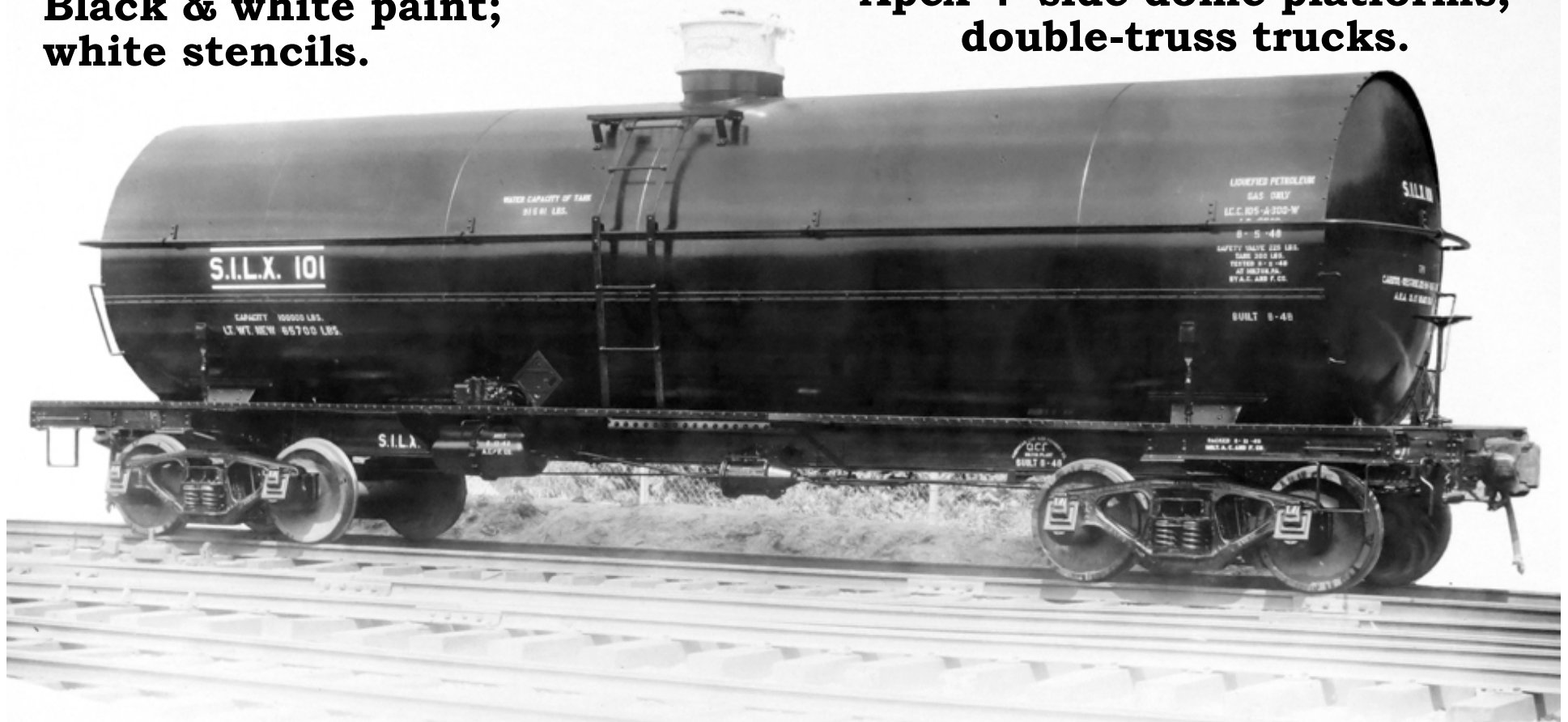
Shippers' Car Line Corp. October 1, 1948
A. C. And F. Co. TC-3365 Neg. No. 172357-A-I

SILX 101-102, 8-48, Lot 3371

Southern Indiana Liquefied Gas Co.

Black & white paint;
white stencils.

Apex 4' side dome platforms,
double-truss trucks.



Southern Indiana Liquefied Gas Co. Aug. 13, 1948
A. C. And F. Co. TC-3371 Neg. No. 172346-A-I

SILX 101-102, 8-48, Lot 3371

Southern Indiana Liquefied Gas Co.

Jim Gerstley collection,
circa 1957.



UTLX 96273-96274, 11-48, Lot 3384

Union Tank Car Co.

10'-0" over running
boards; black & white
paint; yellow stencils.

Apex 4' side dome platforms,
Barber S-2 trucks.



Union Tank Car Company November 23, 1948
A.C. And F.Co. TC-3384 Neg.No. 172370-A-I

SCMX 111, 12-48, Lot 3388
Sturtevant Mill Co., Dorchester, Boston, Mass.

**10'-0" over running
boards; black & white
paint; white stencils.**

Apex 4' side dome platforms, double-truss trucks.



Sturtevant Mill Co. Dec. 23, 1948
A. C. And F. Co. TC-3388 Neg. No. 172372-A-I

**WRNX 2955-4995 (205, by 10s ending 5)/
5405-5845 (45, by 10s ending 5)
3-49, Lot 3332, Warren Petroleum Co.**

**Allied Gray upper jacket, Shamrock
Green dome, black bottom jacket,
u/f, trim; black & white
stencils.**

**Apex 4' side dome
platforms,
double-truss trucks.**



Warren Maritime Corporation March 21, 1949
A.C.&F.Co. TC-3332 Neg.No. 172376-A-1

**WRNX 2955-4995 (205, by 10s ending 5)/
5405-5845 (45, by 10s ending 5)
3-49, Lot 3332, Warren Petroleum Co.**



**George Sisk photo,
C. Winters collection,
1950.**

Warren Petroleum Co. 1962 photo of later ACF car.



Allied Gray – a light shade appearing almost white in some photos.

SHPX 1593-1604, 12-49, Lot 3441

Lessee: Mathieson Chemical Corp.

Black paint; white stencils.
Note different dome
housing & painted
black.

6'-6" x 4'-7" dome platform,
double-truss trucks.



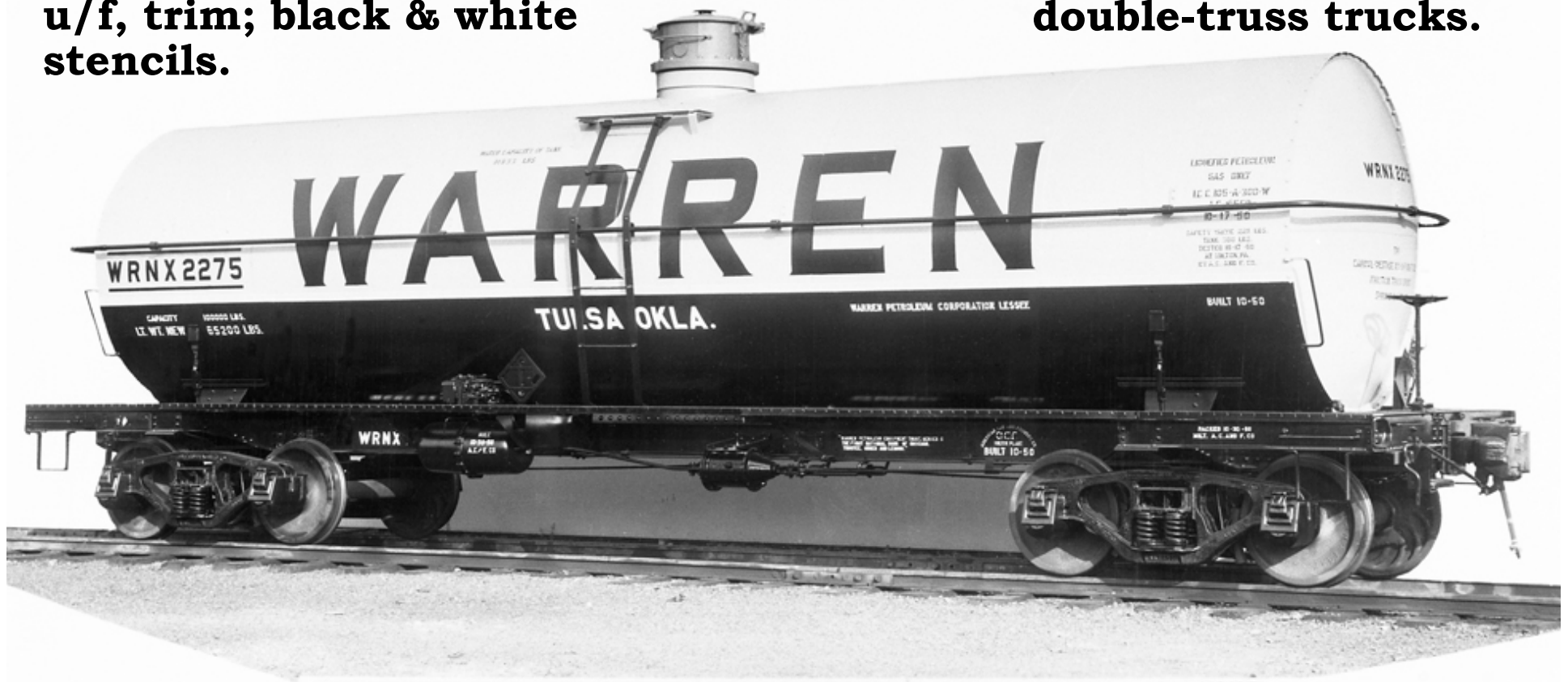
Shippers' Car Line Corp.
A.C. And F.Co. TC-3441

Dec. 15, 1949
Neg. No. 172401-A-1

**WRNX 2205-2295 (10)/2205-2295 (10)/
2855-2845 (10)/5855-6945 (110)/10250-10295 (10),
10-50, Lot 3445, Warren Petroleum Corp.**

**Allied Gray upper jacket, Shamrock
Green dome, black bottom jacket,
u/f, trim; black & white
stencils.**

**Apex 4' side dome
platforms,
double-truss trucks.**



Warren Maritime Corporation Oct. 31, 1950
A.C. And F. Co. 02-3485 Neg. No. 172340-A-1

Phase-out of Type 27 Tank Cars Welded Underframes

- **ACF's first welded underframes in 1945**
- **Type 27 phased out with last cars built 4-51**
- **Equivalent ICC-105A, 11,000-gallon jacketed tank cars built with welded underframes starting in 1-48 with production thru 1954 of about 3,000 cars**
 - **Concurrent production with 58 cars built in 1948 to 1949 (none in 1950) prior to end of the Type 27 cars**

Same ICC-105A, 11,000-Gallon Tank on Welded Underframe, Built 1-48 to 1954

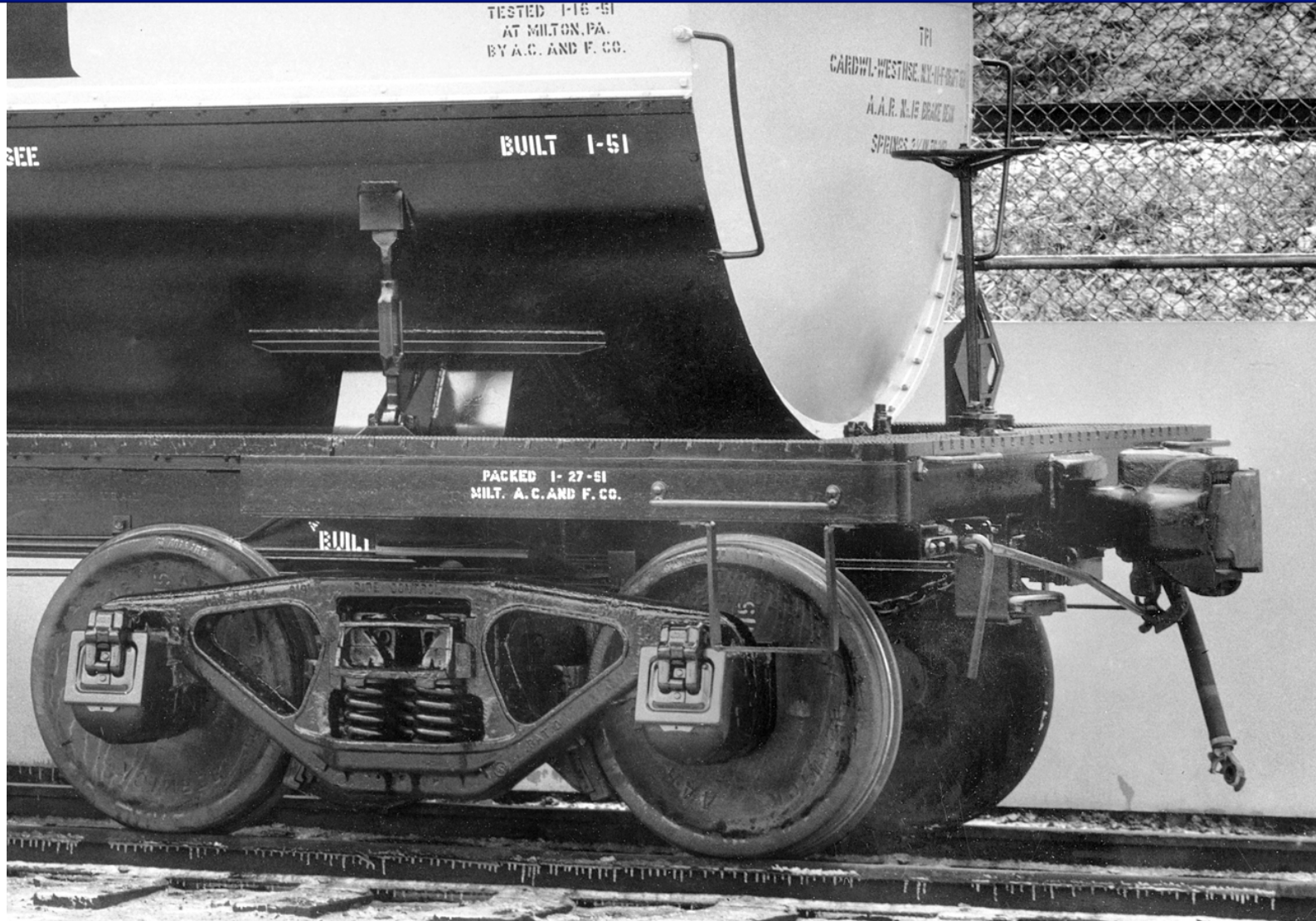
- 1. Truck centers increased from 27'-11" to 28'-2½".
Some Warren cars 4" wider at 28'-6½".**
- 2. No appreciable change in length over end sills,
3½" increase to 38'-10" over strikers.**
- 3. Underframe width increased 4" in 12-48 from 9'-8"
to 10'-0".**
- 4. AB brakes: Parts split with reservoir on right side
of center sill & AB valve below running board.**
- 5. Channel side & end sills changed to flat plate,
similar to UTLX X3 design.**
- 6. Rounded corners where side & end sills meet.**

Other Design Changes to ICC-105A 11,000 Tank Cars with Welded Underframes

A transition of various features.

- 1. Jackets: 1-48 to 1-51, continued briefly with 6 overlapping sections (6 lots), then changed with 3 versions, the most common having 5 overlapping welded sections starting in 9-51.**
- 2. Of the approximately 3,000 cars built, at least 1,850 had jackets with 5 sections, 876 with 6 sections, and 270 with other versions.**
- 3. Dome housing: 1951-1954, increased from 18" x 12" to 20" x 12" & more variations.**

Same Tank on Welded Underframe Built 1-48 to 1954



Same Tank on Welded Underframe Built 1-48 to 1954



WRNX 10045, built 1-51, 6-section jacket.

Same Tank on Welded Underframe Built 1-48 to 1954

**VGOX 500,
built 4-49.**

6-section jacket.



Virginia Gasoline & Oil Co.
A.C.&F.Co.

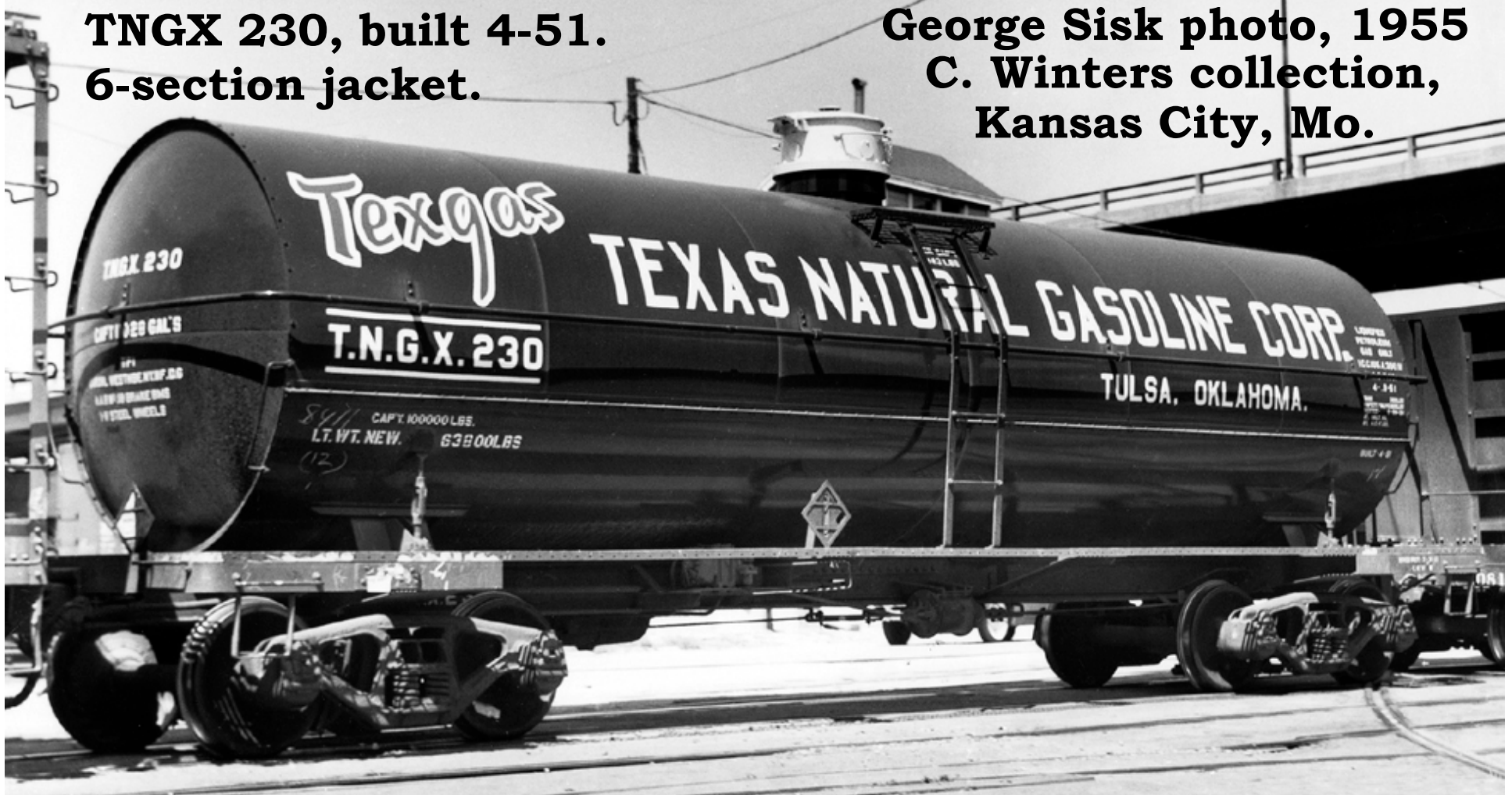
TC-3392

April 27, 1949
Neg.No. 172376-A-1

Same Tank on Welded Underframe Built 1-48 to 1954

**TNGX 230, built 4-51.
6-section jacket.**

**George Sisk photo, 1955
C. Winters collection,
Kansas City, Mo.**



Same Tank on Welded Underframe Built 1-48 to 1954 (jacket changed)



PANX 2001, built 3-52, 5-section jacket.

Same Tank on Welded Underframe Built 1-48 to 1954 (jacket changed)

**AGAX 223, built 1-54,
5-section jacket.
Black/white stencils.**

**Col. Chet McCoid photo, 3-60,
Hamlet, N.C., Bob's Photo.**



Kadee Models Released to Date

9005 – TWOX 4003, Tidewater Associated Oil Co.

9006 – SHPX 1940, Texas Natural Gasoline Corp.

9007 – SHPX 3845, leased to Shell Chemical Corp.

9008 – UTLX 96291, Union Tank Car Co.



Kadee Model #9005

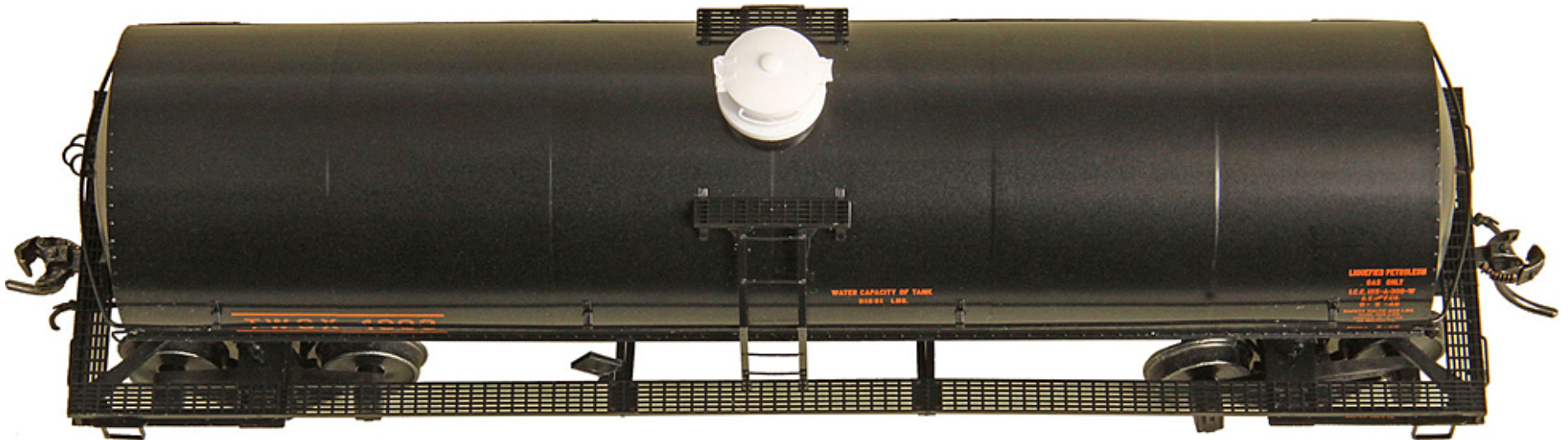
First model released in July 2015

**4' side platforms,
6-section jacket.**



Kadee Model #9005

Overhead view, Apex r/b & d/p



Kadee Model #9005

Overhead "B"- end view

End stencils:

TWOX 4003

10999 GALLONS

TPI (A.A.R. Class)

6½ X 8 TYPE-E-COUPPLERS

CARDWL-WESTHSE N.Y.-11-F-DRAFT GEAR

A.R.A. No. 15 BRAKE BEAMS

FRICTION TRUCK SPRINGS

1-W-W STEEL WHEELS



Kadee Model #9005

"B"- end detail views



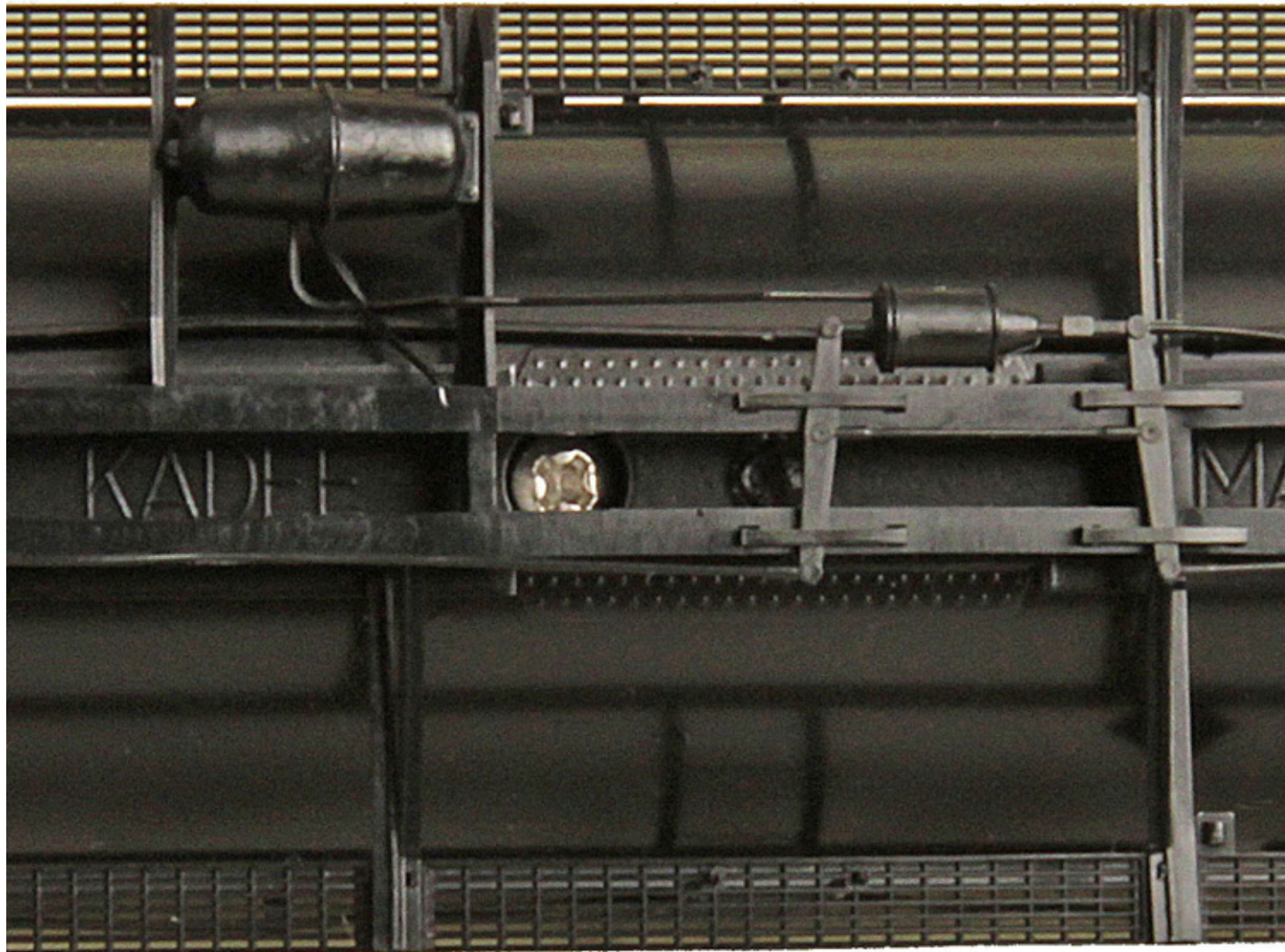
Kadee Model #9005

Dome housing, 4' platform, ladder details



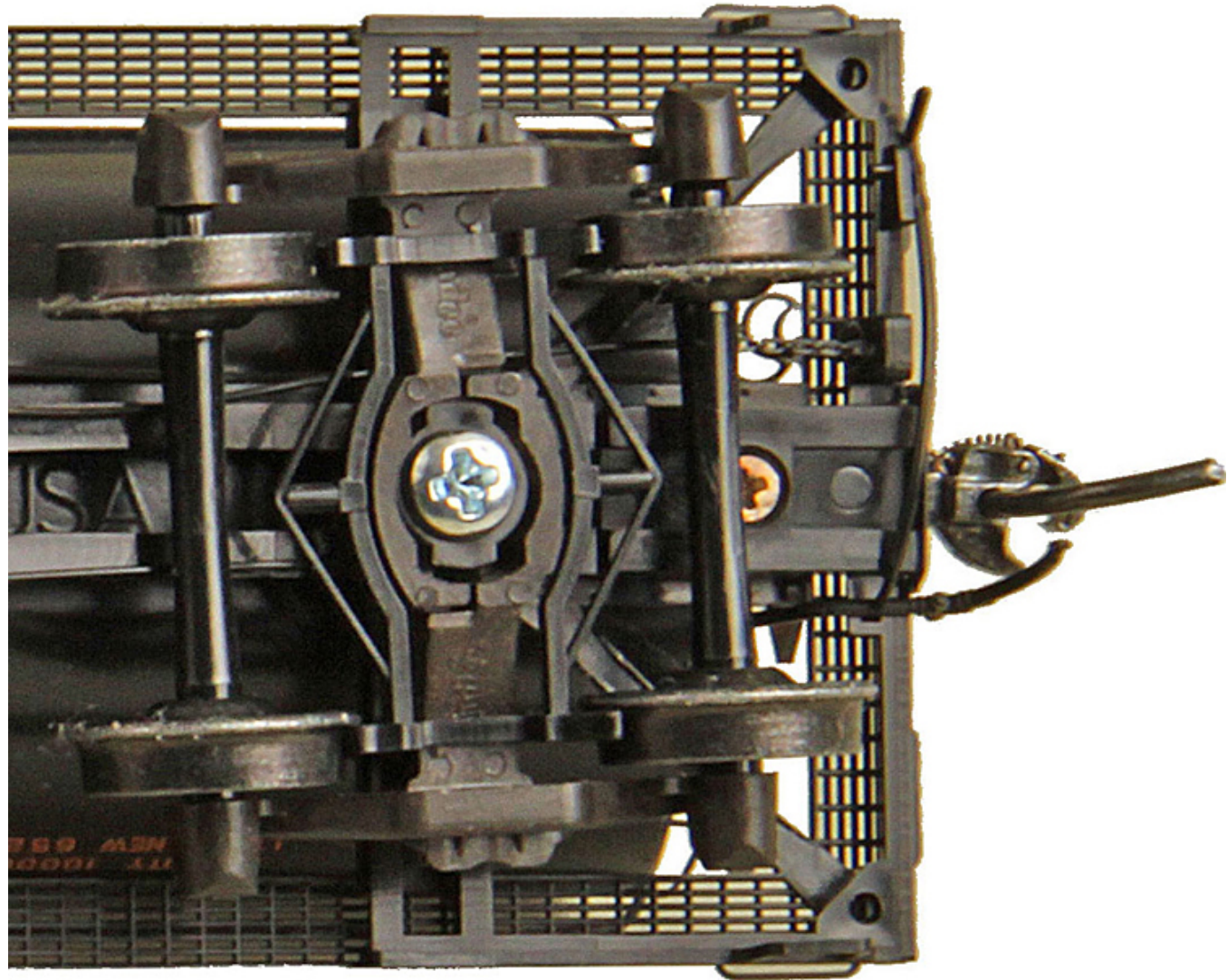
Kadee Model #9005

Underbody & brake hardware



Kadee Model #9005

Trucks & underbody details at end



Kadee Model #9007

Third model released in April 2016

6'-6" x 4'-7" dome platform



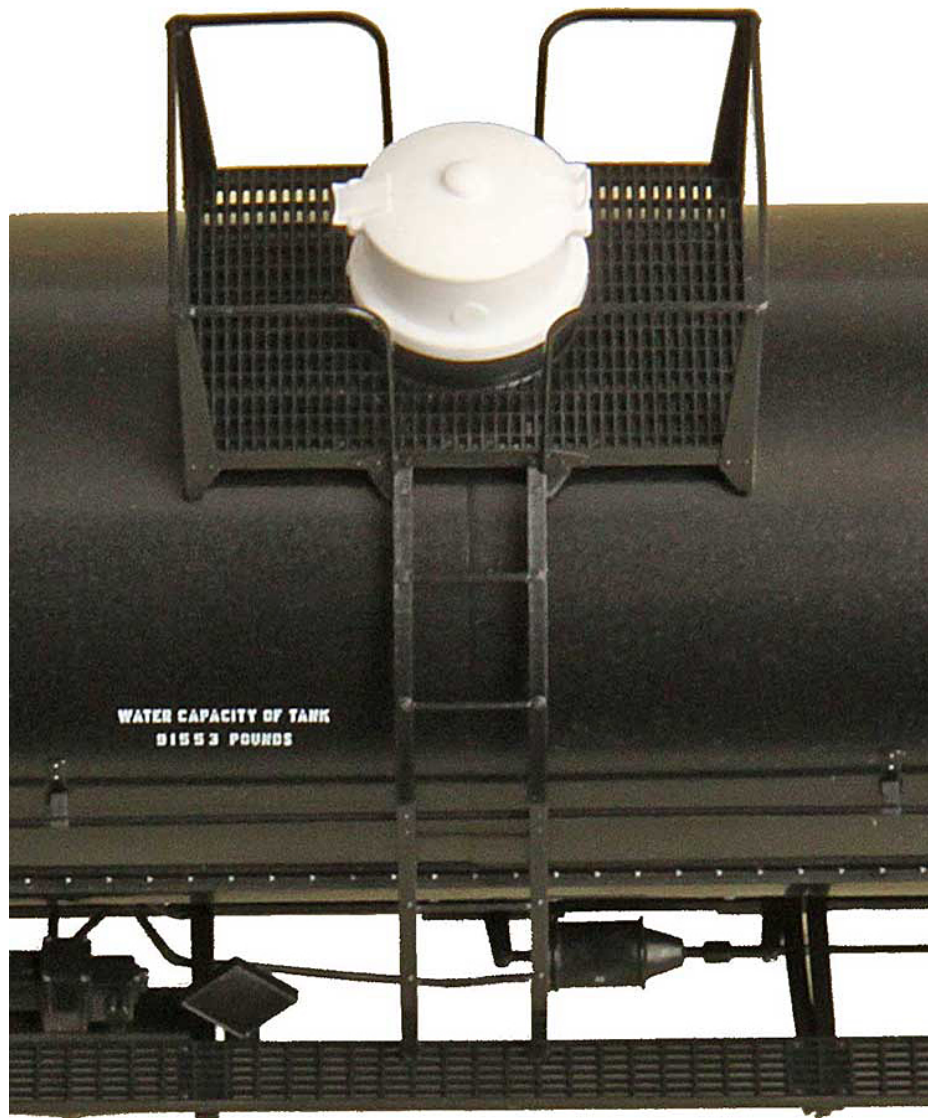
Kadee Model #9007

Elevated side view



Kadee Model #9007

6'-6" x 4'-7" dome platform & ladder



Kadee Model #9007 Overhead "A"- end view

**End stencils vary somewhat
from order to order.**



Atlas ICC-105A, 11,000-gallon tank car models

- **For about 10 years Atlas has offered a “similar” ACF ICC-105A, 11,000-gallon model in HO, N, and O gauge**
- **Many painted/lettered for prototype cars of the ACF Type 27 design that Kadee now offers**
- **Problem: The model isn’t a Type 27 tank car**
- **Other Atlas models painted/lettered for similar prototype cars built 1950-1954**
- **Theoretically, should be no overlap or duplication of the Atlas & Kadee models**
- **The Kadee model is NOT an upgrade of the Atlas model, rather, it’s based on a different design**

Atlas ICC-105A, 11,000-gallon tank car models

- **Atlas model presumably based the model on ACF cars with welded underframes (flat surfaces for side & end sills, but lacks rounded corners)**
- **27'-4" truck centers (too narrow for any prototypes, welded u/f truck centers were 28'-2½" or 28'-6½")**
- **Split brake parts (but positioned inaccurately)**
- **9'-8" underframe width (applied to very few cars)**
- **6-section jackets used on relatively few cars with welded u/f)**
- **Full-surround dome platform (1' too long at 7'-6")**
- **Solid "safety tread" running boards & dome platforms (should be Apex open grid)**
- **An inaccurate hybrid HO model**

Kadee Model #9008

Fourth model released in July 2016



Thank you!

I hope you enjoyed the presentation and found it informational. Please also support Kadee & the fine work they do.