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LIONEL'S OPERATING MILK CARS



The udder truth about these postwar classics

by Joe Algozzini and Roger Carp | photos by Jim Forbes

REMEMBER THREE YEARS AGO during Lionel's centennial, when we asked you to select the most significant developments in Lionel's history? Hundreds of you voted for the operating milk car, and it landed at number 9 in our top 10.

We weren't surprised. The milk car, like Magne-Traction and smoke, reflects what was best about postwar Lionel trains. These path-breaking, entertaining models aren't difficult to find and can be relied upon to work.

Breakthrough freight car

The no. 3462 milk car revived a notable trend at Lionel when it made its debut in 1947. Designers first combined a human figure with toy train animation in 1935, when they created the no. 45/045 automatic gateman. A similar accessory, the no. 1045 operating flagman, followed three years later.

Lionel took toy train animation in a second direction in 1938, when it introduced two remote-control coal dump cars. Neither those models nor the trio of operating cars that debuted in 1939 used a miniature worker.

Updated versions of the coal dump, log dump, and merchandise cars cataloged in 1946 also lacked miniature railroad figures. Fortunately, an outside inventor, Richard G. Smith, aimed to change things.

Lionel's operating milk cars may have differed in size and color, but every one of them captured the imagination of boys and girls during the postwar era. Models courtesy of Joe Algozzini; photo by William Zuback

In 1945, or perhaps a year or two earlier, Smith shared with Lionel plans for an automatic milk car. Small cans, loaded into a chute through an open hatch on the car's roof, were ejected from a door on the side when an operator pressed the button on a remote controller.

Smith placed a figure of a milkman inside the car. This created the illusion that the miniature worker was pushing the cans onto a platform. A special section of track, which included the platform, activated this accessory.

By the early months of 1946, Lionel's Engineering Department was fine-tuning Smith's invention in anticipation of its becoming part of the train line. Dale Gash improved the mechanism, and Vito Bertucci sculpted the figure. The 3462 was ready to go less than a year later.

Although heavily promoted, the new milk car wasn't shown on the cover of the 1947 Lionel consumer catalog. Furthermore, illustrations inside the catalog didn't picture the no. 3462 correctly. Instead, they depicted the 9 $\frac{1}{4}$ -inch model as similar to American Flyer's white and Tuscan Baltimore & Ohio boxcars (O gauge no. 506 cataloged between 1939 and 1942 and then S gauge no. 633 cataloged in 1946).

As produced, the 3462 was painted white, except for four aluminum doors, four black metal steps, and a brake wheel. The shades of paint differ, some being true white and others being cream (flat and glossy have been reported). These differences indicate that, although Lionel expected sales of the





Variations of the 3462 include cream (left) and white.

milk car to be brisk, it needed at least two production runs to fill orders.

To the right of each door opening, Lionel workers heat-stamped a “circle-L” emblem and the car data in black. On the opposite side they added the catalog number “3462” and “AUTOMATIC REFRIGERATED MILK CAR,” plus a built date of “3-47” and other information.

Milk cars from 1947 featured staple-end trucks and staked coupler heads. Turning a model upside down partially reveals the brass baseplate of the internal mechanism.

In 1948, engineers redesigned the internal mechanism for better performance (the figure pivoted forward on a swinging plate rather than a square slide) and changed to a thicker, sheet-metal baseplate that attached differently to the frame.

Lionel included the 3462 in two cataloged outfits in 1947 and three in 1948. The milk car was also offered for separate sale at \$8.95 in 1947 and \$9.50 a year later.

Pint-sized containers

Lionel gave the milk car a new number in 1949, as part of the changeover from coil to magnetic couplers. The no. 3472 was otherwise identical to its predecessor, although sometime during or after the first production run Lionel began molding the shell out of white plastic. This change saved money on paint and labor, but color variations do exist for 1949.

The 3472 was included in three cataloged sets in 1949 and two for each of the next couple of years. It was a separate-sale item at \$9.50 in 1949 and '50.

For 1950, Lionel replaced the body shell with a new shell (part no. 6472-5) developed for the company's no. 6472 refrigerator car. Lionel also dropped aluminum doors in favor of white plastic doors, and it changed the frame to accommodate the new doors.

In 1954, the no. 3482 milk car made its debut. Why Lionel renumbered this item remains a mystery because the new milk car differed only slightly from the 3472. The white plastic body shell was identical except for the two new cutouts on each side that protected the door springs.

Probably the most interesting aspect of the 3482 is that the earliest ones contained a factory error. Although the correct “3482” number was heat-stamped in black on the left side of each door, “RT3472” still appeared on the right side. Lionel soon corrected this mistake, but cars with the old number are desirable to collectors.

The 3482 was part of three cataloged outfits in 1954 and one in '55. In both years Lionel offered it for separate sale at a price of \$10.50. Separate-sale models available in 1955

1947



The 3462 is incorrectly pictured in the consumer catalog with a brown roof, ladders, and ends; white steps; a Southern Pacific herald to the right of the door; and only “REFRIGERATOR” to the left.

- First rubberized white figures are about $1\frac{15}{16}$ inches high before Lionel reduces them to about $1\frac{1}{4}$ inches.
- Each 3462 came with seven magnetic cans and a no. 3462P sheet-metal platform with a green-painted base, gray steps, and stand in varying shades of white and cream. “3462P” and other Lionel data were stamped on the underside until about 1964.

1948



Early versions of the platform have an offset opening in the base (where the uncoupling track section was positioned), and the four tabs (two at each end of the base) are solid. The opening was soon enlarged, and then the two tabs closest to the stand were split. This style continued through 1966.

- Lionel quit using glossy paint on the milk car. Glossy versions command a premium from collectors, though they aren't as rare as many hobbyists think.
- Smaller figures standing approximately $1\frac{1}{16}$ inches tall were used through 1955.

1949

- The 3472 includes a “flared-end” activator rivet, a frame that changed twice (each change included more openings), an improved internal mechanism, and aluminum doors.

- Each milk car came with six magnetic cans and a no. 3462P sheet-metal platform.

1950



Molded supports were added beneath both ends of the roofwalk.

- Roof hatch has blackened instead of shiny pins and was lengthened to improve performance.
- The 3472 features the larger brakewheel rivets used on the nos. 3464 operating boxcar and 3656 cattle car.

1951

- Lionel raised the separate-sale price to \$11.50. Because of the Korean War, it sent dealers a packet of gummed, prepriced OPS stickers to place on each separate-sale box.

- Frame was modified to have fewer openings.
- Truck pivot stud was attached to the inside frame with a washer and horseshoe clip.

1952

- The 3462P was cataloged as a separate-sale item through 1955 for \$2. Collectors value the box, since the platform is common.
- Boxes of five milk cans were available as item no. 3462-70 for \$1.25 through 1959. Some boxes contained seven cans.

- “Bar-end” trucks became the norm.
- OPS information was either printed or rubber-stamped on the separate-sale boxes.

1953

- The 3472 was a component of one cataloged set, down from two in 1952.

- Separate-sale price of \$10.50 was unchanged from the previous year.



probably represented leftover inventory, since the new no. 3662 was the milk car Lionel wanted to sell.

Plain and chocolate cars

The no. 6462 gondola (new in 1949) launched a major trend at Lionel that characterized the roster of cars by the mid-1950s. One by one longer, near-scale length models replaced shorter, less-realistic versions. This occurred with the milk car in 1955.

The new no. 3662 performed the same functions as previous cars and relied on the same 1 $\frac{1}{16}$ -inch figure, but otherwise was redesigned. Its new ejecting mechanism dispensed with a magnet. The chemically treated cylinders were screwed to the coil bracket, although the earliest cylinders were nickel-plated and held in place with the same yoke used with the brown no. 352 ice depot.

Since Lionel included the 3662 in two cataloged sets and offered it for separate sale at \$10.95 in 1955, more than one

The roof of the 3662 ranged over the years from reddish-brown (left rear) to chocolate (right rear) to flat brown.

production run was needed. Differences in the shades of plastic resulted, especially concerning the brown roof. Also, the milkman figure could now come with a painted face and hands.

The 3662 used its own milk cans, so Lionel made a set of seven non-magnetic cans that was available for separate sale (no. 3662-79 as cataloged, but stamped 3662-60 on the package). In 1955 and '56, it sold for \$1.25 and came in a 2 $\frac{1}{2}$ - by 4 $\frac{1}{2}$ -inch envelope.

For 1956, the 3662 came in four cataloged sets and could be purchased separately for \$10.95. A year later, it was part of three outfits and had the same price.

Lionel kept the 3662 as a separate-sale item in 1959 at \$10.95, but it offered something new as a set component. To attract more attention and corporate sponsorship, it developed the no. 3672, a large milk car decorated for Corn Products Co.

Lionel Postwar Operating Milk Cars

Number	Rarity*	Estimated Prod.	Good**	Excellent
3462 (glossy white)	H	1,501 to 2,600	\$35	\$85
3462 (1947)	V	50,001 to 75,000	\$20	\$55
3462 (1948)	W	75,001 to 100,000	\$20	\$55
3462P with box	D	101 to 250	\$500	\$950
3472	X	100,001 to 200,000	\$15	\$45
3482/72	E	251 to 750	\$60	\$120
3482	S	25,001 to 30,000	\$20	\$55
3662(1955-60)	V	50,001 to 75,000	\$30	\$70
3662 (1964-66)	O	7,001 to 10,000	\$80	\$270
3672 (painted)	F	751 to 1,000	\$100	\$400
3672 (unpainted)	M	5,001 to 6,500	\$100	\$375

*Listings of rarity, based on a scale descending from A to Z (with A being the rarest), are derived from actual or estimated quantities of items produced by Lionel. An explanation of these ratings, including how production figures were ascertained, appears on page 73 of Joe Algozzini's *Lionel's Postwar Space & Military Trains* (Kalmbach Publishing Co., 1996).

**Values for items in good and excellent condition are taken from the 2001 edition of *Greenberg's Guide to Lionel Trains, 1945-1969. Vol. 1: Motive Power and Rolling Stock*.

The 3672 used a two-piece yellow shell and a roof molded in the same brown plastic as the 3662 from 1957 and '58. The painted or unpainted plastic body had brown heat-stamped lettering and a decal on the right side of the doors that depicted a jar of Bosco "Nutritious Chocolate Flavored Syrup."

The interior design of the 3672 was the same as the 3662 from 1958 (the cars operated the same). However, black plastic typically covered the wires inside the Bosco car.

Each 3672 came with a platform and seven Bosco milk cans. The platform had a brown-painted base and a yellow-painted stand. The "3462P" and other Lionel data were no longer stamped on the bottom.

A set of seven yellow-and-brown cans with "Bosco" rubber-stamped in red was available for separate sale at \$1.25 in 1959 and '60. They were packaged in a 2½ by 4¼-inch envelope that had the correct catalog number (no. 3672-79).

When Lionel produced a yellow-painted – rather than yellow-molded – version of the Bosco car is uncertain. Typically, Lionel made painted cars first and then switched to unpainted ones as a cost-saving measure.

But this rule may not apply to the 3672 because the yellow-painted model is a known component of Super O outfit no. 2553WS from 1960, when, logic suggests, any Bosco cars packaged represent leftover inventory. If so, this information (painted examples made first, but used up later in 1960) may also suggest that Lionel went to a "first-in, last-out" method for depleting leftover inventory.

In 1961, Lionel dropped both the 3662 and 3672 from its line and offered no milk car for the first time since 1946. The 3662 returned in 1964 as a part of five cataloged outfits and a separate-sale item at \$14.95.

The car's graphics were the same as before, except that "New 4-55" was removed. The roof remained flat brown, and AAR plastic trucks were the norm, with some using a wider, copper-colored Delrin leaf spring.

Lionel reworked the rubber milkman figure in late 1964 or early '65. Designers added a retainer to keep the cans in the correct position and replaced the black plastic wire covers with rubber tubing (as was used with the axles on the no. 6405 flat-car with piggyback van cataloged in 1961). The underside of the platform lacked a stamped number and data.

In 1965, the 3662 was part of two cataloged sets, and the separate-sale price increased to \$15. The roof sections were a richer brown than before, and on the AAR trucks the axles were visible where they attached to the sideframes. The figure appeared to be smaller and had a flat cap instead of a round one.

The armature plate was changed to a U-shape instead of a square, which made it easier to avoid contact with the armature pin assembly. The solenoid coil became green.

In 1966, Lionel included the 3662 in two cataloged sets and maintained the separate-sale price of \$15.

The envelope with separate-sale cans was now white and measured 2½ by 4¼ inches. It showed for the first time the 3662-79 catalog number.

Cow runs dry

The 3662 offered in 1966 might not have been the cream of the crop, but it did represent the final appearance of the legendary operating milk car in a postwar Lionel catalog. To the disappointment of Lionel enthusiasts, the company didn't offer the 3662 or any of its brethren in 1967-69.

Fortunately for those of us who love postwar electric toy trains, so many milk cars were produced that acquiring one in good, working order isn't difficult. So put one on your layout and watch the fun begin as Lionel's tireless milkman keeps on pushing out those cans. **CTT**

1954



Internal mechanism was modified: ejecting device has a larger plunger, coil spring, and solenoid, plus a removable coil.

- Frame was redesigned so the body could be attached with a slot and tab at one end and a screw at the other, rather than with the two frame springs and mechanism screw used on the 3472.

1955

- Lionel offered both 3482 and 3662 milk cars.
- Roof section was molded in a reddish brown or a chocolate brown that had several shades. Doors were color-coded to match the roof sections, but don't always match.
- The 3662 features a new two-piece shell with a body section molded in white plastic and a roof in brown plastic (reminiscent of the preproduction 3462 shown in the 1947 catalog).

1956



Copper or white plastic wire covering replaced the earlier black version (shown in photo).

- Chocolate brown roof joined by a flat brown version that came in different shades.
- Shiny knuckle pins replaced blackened ones.
- Lower section of the chute was notched so cans fell into place more effectively.

1957

- Flat brown roof.
- Box of milk cans priced at \$1.
- Coupler drawbar has a support hole.

1958

- Solenoid coil went from copper to red.
- Separate-sale price rose to \$12.95.
- The 3662 available in two cataloged sets.

1959



Lionel offered both 3662 milk car and 3672 Bosco car.

- Only 3672 was offered as a set component (one outfit).
- Collectors consider 3672 most desirable of Lionel milk cars.

1960

- The 3672 again used the instruction sheet for a 3662 (part no. 3662-81), titled "Lionel Automatic Milk Car" and dated 5-59.
- Lionel again offered both 3662 milk car and 3672 Bosco car.
- Both cars available for separate sale at \$12.95.



Who let the logs out?

Lionel's postwar operating
log and barrel cars

by Joe Algozzini and Roger Carp | photos by Jim Forbes

LOGS AND BARRELS were big business in Lionelville during the postwar decades. O gauge operating cars seemingly carried and unloaded so many of these wood products that it's a wonder there are still trees in the forest.

Lionel's barrel and log cars entertained kids long ago. Hobbyists continue to enjoy them, particularly as they learn about the manufacturing history and variations of these operating cars.

Logging on

Lionel took a major step forward in 1938, when its catalog announced, "Magic Remote Controls." The new nos. 3659 and 3859 remote-control dump cars relied on a solenoid (installed in the center of their frames) to mystify onlookers by emptying their loads without manual intervention.

Solid sales persuaded Lionel engineers to adapt the new remote-control device to more cars in 1939. On the no. 3651 lumber car, a solenoid caused the portion of the frame carrying dowels to tip up and dump them. On the no. 3652 operating gondola, the same part enabled operators to fling wood barrels out of the yellow-painted body into a tray.

Lionel unveiled a full line of O and O-27 gauge trains in 1946. The no. 3451 log car featured a die-cast metal frame and new automatic knuckle couplers. Its operating mechanism was the same as the 3651's, and the car worked well independently or with a no. 164 log loader.

Three years later, Lionel's development of magnetic couplers meant that carryovers received new numbers. The catalog for 1949 designated the log car as no. 3461; otherwise, it didn't differ from its predecessor. The 3461 remained in the catalog through 1955, with its trucks going from the staple-end type to the bar-end type in 1951-52.

Rolling out the barrels

Missing from the line was an updated version of the no. 3652 operating gondola. Engineers hadn't forgotten the play potential of barrels, however, and Lionel rolled out the no. 362 barrel loader in 1952, followed by the no. 3562 barrel car in 1954.

This long gondola included a metal unloading trough with a vibrating mechanism that conveyed barrels up the ramp toward a rubberized figure on the unloading bracket. A cam held the kegs in place until an operator was ready to unload them.

The black-painted no. 3562-1 was the first of four versions of the barrel car cataloged between 1954 and 1958. The more common variation available in 1954 came with a gray-painted body and blue heat-stamped lettering (no. 3562-25).

For the next three years, Lionel offered the 3562-50, which featured a yellow body (painted or unpainted) and black heat-stamped lettering. For 1957 and '58, the orange no. 3562-75 was standard.

Lionel Postwar Log and Barrel Cars

Number	Rarity*	Estimated Production	Good**	Excellent
3361 (serif)	W	75,001 to 100,000	\$20	\$45
3361 (sans serif)	J	3,001 to 4,000	\$20	\$45
3361 (number on left)	H	1,501 to 2,600	\$20	\$45
3362	U	40,001 to 50,000	\$15	\$35
3362/3364	H	1,501 to 2,600	\$15	\$35
3364	V	50,001 to 75,000	\$15	\$35
3451 (heat-stamped)	W	75,001 to 100,000	\$15	\$35
3451 (rubber-stamped)	R	17,501 to 25,000	\$15	\$35
3461 (heat-stamped)	X	100,001 to 200,000	\$15	\$35
3461 (rubber-stamped)	D	101 to 250	\$30	\$70
3461-25	T	30,001 to 40,000	\$15	\$45
3562-1	H	1,501 to 2,600	\$75	\$150
3562-25 (1954)	V	50,001 to 75,000	\$20	\$55
3562-25 (1955)	H	1,501 to 2,600	\$20	\$55
3562-25 (red "35621")	A	1 to 12	\$500	\$1,000
3562-25 (red "356225")	H	1,501 to 2,600	\$125	\$325
3562-25 (yellow-painted)	B	13 to 25	\$500	\$1,000
3562-50 (painted)	G	1,001 to 1,500	\$35	\$85
3562-50 (unpainted)	V	50,001 to 75,000	\$20	\$55
3562-75	Q	15,001 to 17,500	\$35	\$75

*Listings of rarity, based on a scale descending from A to Z (with A being the rarest), are derived from actual or estimated quantities of items produced by Lionel. An explanation of these ratings, including how production figures were ascertained, appears on page 73 of Joe Algozzini's *Lionel's Postwar Space & Military Trains* (Kalmbach Publishing Co., 1996).

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Lionel's operating log and barrel cars ran on layouts across the country during the postwar era. Kids then and adults today love the action and color. Models courtesy of Joe Algozzini

The barrel car helped launch a trend toward near-scale operating cars at Lionel. With this in mind, engineers created the longer no. 3361 log car. The new model entered the line in 1955, the final year the 3461 (its shorter counterpart) was cataloged.

The action on the all-plastic 3361 was more realistic than before, thanks to a ratcheting mechanism that slowed its operation. Pressing a button on a remote controller tilts a rack of dowels a notch at a time until they roll off into a bin and the tray slips back into place.

Calling the logs home

Lionel cataloged the 3361 through 1959. After offering nothing similar the next year, it introduced the no. 3362 helium tank unloading car in 1961. This model looked like the 3361, although its plastic frame was dark green and its load was silver-painted wood dowels disguised as tanks of helium.

The dumping mechanism of the 3362 also differed. Tanks were tossed off in one fast move powered by a spring. Resetting the tray required manual dexterity, not a push of a controller button.

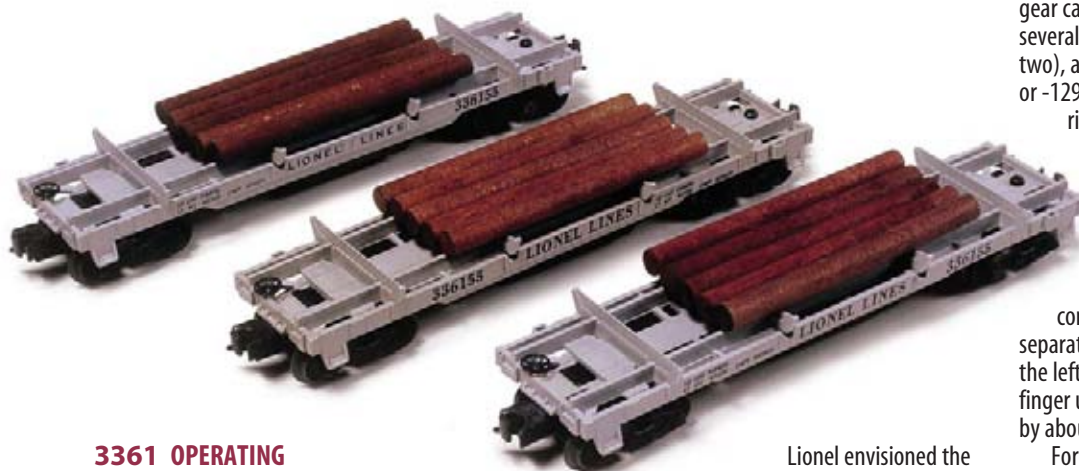
Lionel cataloged the 3362 through 1963 and used it as a component of uncataloged sets the next year. The same item appeared in other 1964 uncataloged sets with a new name ("operating log dump car") and a different load (three brown-stained dowels). That car (referred to as no. 3364) was listed in the consumer catalog through 1966 and in 1968.

Things got more confusing in 1969. The last year of Lionel's postwar production saw the dark green dump car carrying two or three of the silver-painted helium tanks. Not a mark was stamped on the frame, and the model came in a unique box labeled "3362/3364 operating unloading car."

Despite what might be thought an ignominious end, the story of Lionel's postwar log and barrel cars commands our attention. Take a look at the descriptions of these models and think about acquiring them. The listings of rarity, descending from A to Z, were derived from records of 1957 and '58 production and extrapolations based on those figures. **CT**

The authors thank Paul Ambrose, Joe Henley, Bob Jacobson, and John Schmid. Tips on repairing log cars appear in the March 1999 CLASSIC TOY TRAINS; barrel cars are covered in the December 2001 issue.

SEE FOLLOWING PAGES FOR LISTINGS



3361 OPERATING LUMBER CAR: 1955-61

Advertised as a scale-detailed 11-inch logger, the gray plastic no. 3361 debuted in 1955 as a part of two cataloged sets and a separate-sale item. It has "LIONEL LINES" rubber-stamped in black in serif style (more common) and sans serif; the number "336155" appears to the right of the lettering. Both styles are shown in the consumer catalog, where the 3361 is illustrated incorrectly as a red flatcar. The car came with longer stained logs than the 3461 did.

Lionel envisioned the 3361 as something special because, during the car's seven-year run, it was included in 14 cataloged sets. Over time, the gray plastic varied from light to medium to dark; the lettering differed as well.

Production of the 3361 used a two-cavity mold, as either a "1" or "2" appears on the bottom of the plastic body. Although both look the same, the "2" has an extra rivet.

For 1955 production, key features included black knuckle pins (with or without tabs). The

gear cam (part no. 3361-14) was molded in several shades of plastic (orange and white being two), and the insulating washer (part no. 600-29 or -129) is red, like the one used with the no. 155 ringing highway signal. However, black plastic gears were also used.

In 1956, shiny knuckle pins became the norm, and only serif lettering was used, although transition was a possibility. The "336155" was stamped to the right of the lettering, except for components of outfit no. 2267W and separate-sale items, where it often appears on the left. The *Lionel Service Manual* notes that the finger underneath the dump frame was increased by about $\frac{1}{16}$ inch.

For 1957, the number was moved back to the right. In addition, the hole in the knuckle drawbar became the distinguishing feature all the way through to the final run.

In 1959, those lumber cars offered for sale were probably left over from previous years, or a short production run was made just prior to Lionel's changing the style of boxes.

In 1960 and '61, enough 3361s were left in stock to allow Lionel to feature them in advance catalogs. There were not, however, enough to show this car in the consumer catalog.



3362 HELIUM TANK UNLOADING CAR: 1961-65

Introduced in 1961, the no. 3362 has the same body as the 3361, except that it was molded in green plastic and had white rubber-stamped lettering. The 3362 has AAR trucks with a three-piece knuckle coupler. Its new, spring-loaded dump frame was a downplay in quality when compared to that of the 3361.

The 3362 had the good fortune of being selected as a part of the first cataloged set for 1961 and designated as a separate-sale item. After that year, however, things got confusing. Lionel introduced a one-piece Delrin coupler in 1962, but most of the 3362s offered in no. 13048 outfits retained 1961 features.

In 1963, the 3362 wasn't offered for separate sale, but was included in set no. 13118. The specs, however, were often the same as before, suggesting that Lionel broke up unsold stock intended for the 13048 sets and repackaged it.

In 1964 and '65, Lionel got rid of its unsold helium tank cars by packaging them in uncataloged sets, such as nos. E-5009 offered by Western Auto (1964) and 19410 offered by Branch Brook Co. (1965).

3364 UNLOADING CAR: 1964 3364 OPERATING LOG DUMP CAR: 1965-66 and 1968

As Lionel was dumping its leftover stock of unsold helium tanks, management had a change of heart and returned to logs. Although not introduced in time to make the consumer catalog or *Lionel Service Manual*, the no. 3364 unloading car was included in 1964 uncataloged sets, such as J.C. Penney set no. 0672.

The 3364, like the helium tank car, was molded in green plastic with white rubber-stamped lettering. However, the "3362" was retained, and the Lionel number (3364) wasn't part of the design. Therefore, the substitution of

logs made the difference in the car's catalog number. The 6/64 instruction sheets were printed with the correct "3364" number.

In 1964, the features included an operating coupler and a dummy, with only the latter's axles visible where they attached to the sideframes. In 1965 production and after, the axles are visible on the operating and dummy couplers.

In 1965, the 3364 was included in outfit no. 11520 and offered for separate sale. The consumer catalog is correct, as the operating log dump car is listed as 3364, and the illustrations show the correct "3362" on the right side of the car.

As part of cataloged set no. 11520 from 1966, the 3364 is correctly illustrated in the consumer catalog. The one pictured for separate sale omits "3362."

Lionel used the same photo for the 1968 separate-sale listing of the 3364 and the 1969 listing of the 3362/3364. The price of the 3364 rose from \$6 in 1966 to \$7 in 1968, when the cars offered for sale were probably leftover inventory.

3451 AUTOMATIC LUMBER CAR: 1946-48

Introduced in 1946, the die-cast metal, black-painted no. 3451 is perfectly illustrated in the consumer catalog. It was included in two outfits, nos. 1417WS and 2115WS. The car's features include silver rubber-stamped lettering, blue connecting wires, non-staked couplers, and coated contact insulators. Also included with each lumber car were five unstained wood dowels and a no. 160 Bakelite bin.

In 1947, the 3451 was again offered in two sets (nos. 1441WS and 2131WS). Its features changed, as white heat-stamped lettering, black connecting wires, uncoated insulators, and staked couplers became the norm.

Starting in late 1947, designers added a molded ridge ("filler") that ran the length of the underside of the car on the solid-stake side. This ridge was at a 45-degree angle, possibly to reinforce the center hole, whose diameter went from about $\frac{15}{16}$ inches in 1946 to $\frac{13}{16}$ and then $1\frac{1}{4}$ inches in 1947.

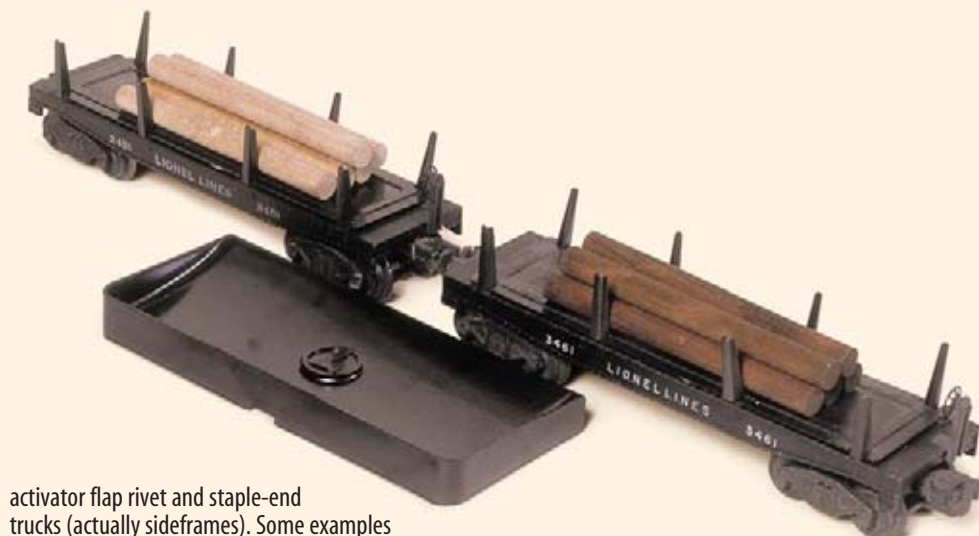
In 1948, the 3451 was included in four cataloged sets and offered for separate sale with an increase in price from \$5.75 to \$6.50. The features are the same as 1947, except the box decreased in size.

3461 AUTOMATIC LUMBER CAR: 1949-55

The 3461 came equipped with the new magnetic couplers that replaced the coil couplers from 1948. It is perfectly illustrated in the consumer catalog as a part of four sets and a separate-sale item.

The black-painted 3461 has a die-cast metal frame with white heat-stamped lettering. Lionel did rubber-stamp some 3461s in silver, as it did the 3451. However, these variations are much rarer than are rubber-stamped 3451s.

In 1949, key features included a flared



activator flap rivet and staple-end trucks (actually sideframes). Some examples even had a smaller baseplate hole.

In 1950, the flared rivet process was replaced by the round-end version, and a hole was punched out of the activator flap (armature assembly). The load changed to five stained logs, although they were probably included with late-1949 separate-sale examples.

By late 1950, the diameter of the opening on the frame had been reduced from $1\frac{1}{4}$ to $1\frac{1}{8}$ inches. This change was likely made to accommodate subsequent production steps.

In 1951, the 3461 came in only one cataloged set, and the specs were the same as before. It was also offered for separate sale, with the price increasing from \$6.50 to \$7.75.

Dealers were issued a packet of pre-priced, gummed labels to place on each separate-sale box during the Korean War. Due to a possible shortage of raw materials, the 3461s may have been leftover inventory, with a short production run made to fill in gaps.

In 1952, the OPS information was letter-pressed on the box, and bar-end trucks

(sideframes) became the norm. Once again, the 3461 was offered in only one cataloged set, but at least the price for separate-sale cars dropped to \$7.25.

The black 3461 made its final appearance in the consumer catalog in 1953, when it was included in two sets (nos. 2211WS and 2213WS) and offered for separate sale. The specs were the same as in 1952, but the boxes changed. The 3461X box was different, and the inner (tuck) flaps on the boxes of separate-sale pieces were slightly longer.

When Lionel specified that a 3461 lumber car was available for separate sale for \$7.25 in 1954 and '55, the catalog showed a car with a green frame. However, logic suggests that black cars could be obtained in those years until the inventory was depleted.

By the way, reference guides mistakenly state that the five "Stained Logs" were introduced in 1954. However, besides the evidence given here to counter this claim, the consumer catalog for 1952 shows five stained logs.

3362/3364 OPERATING UNLOADING CAR: 1969

Cataloged in 1969 only, the no. 3362/3364 was an oddball. The reason for the two numbers (3362/3364) was that helium tanks were used with the 3362 designation and logs with the 3364, although logs were the predominant load.

This so-called new car was still molded in green plastic, but more often than not the rubber-stamped lettering was omitted from the car. This occurred because those cars were probably leftover or unassembled inventory from 1966 and 1968.

The 3362/3364 was offered for separate sale only in 1969, but the illustration in the consumer catalog is the same as used in 1966 and 1968. All three pictures show the unloading car without a number on the right side.

The car's features in 1969 included an operating coupler and a dummy, with the axles visible where they were attached to the sideframes. If the spring clip has a washer attached to where it fastened to the drawbar, the car was probably assembled in 1966.





3461-25 AUTOMATIC LUMBER CAR: 1954-55

In 1954, Lionel promised vibrant colors in its train line, so the green-painted, white heat-stamped no. 3461-25 was a step in the right direction. This car, which replaced the black 3461, has the same features as the 3461 from the year before, except the top of the knuckle coupler is engraved (not smooth) and the 160 bin is larger. The 3461-25 was included in three cataloged sets and offered for separate sale at \$7.25.

In 1955, the 3461-25 was included in only one cataloged set. Cars offered for separate sale were probably leftover inventory from 1954.

The packaging of the 3461-25 followed the same pattern as that of the 3461. When included in a set, it used a smaller box, as the bin was placed randomly inside the set box. When offered for separate sale, a larger box was used to accommodate the bin inside.

3562-1 OPERATING BARREL CAR (black): 1954

The no. 3562-1 operating barrel car was the perfect companion for the no. 362 barrel loader introduced two years earlier, right down to the yellow trough on many cars, which matched the color of the 362 (some cars did come with a black-painted ramp). The first barrel car was painted black, with white heat-stamped lettering. The suffix "-1" appeared on the car and not on the box.

The 3562-1 was part of outfit no. 1521WS, an O-27 five-car freight train. In addition, except for the figure, this barrel car is perfectly illustrated in the consumer catalog for 1954.

In that catalog, the figure on the 3562-1 is shown wearing blue overalls and a red-and-white checkered shirt. When issued, however, the figure was the same small and unpainted blue man as Lionel had used on the no. 3474 Western Pacific operating boxcar from 1953.

On later examples of the 3562-1 operating barrel car, this figure appears with his hands and face painted.



3562-25 OPERATING BARREL CAR (gray): 1954-55

The no. 3562-25 also debuted in 1954, and both the car and the box had the “-25” suffix. Painted gray, it came with blue heat-stamped lettering and the smaller figure with his hands and face painted. This car was included in four cataloged sets and offered for separate sale. Therefore, more than one production run was needed to fill orders.

Different runs resulted in cars having various shades of blue lettering, of which royal and navy are recognized by collectors. Lionel also heat-stamped some gray cars with red lettering; they were known components of set no. 2217WS. However, an even rarer red-lettered example was stamped with the black barrel car’s number. Also, in 1955, a version came painted in yellow with the number 3562-25.

In 1955, outfit no. 1533WS included gray or yellow barrel cars, although the 3562-25s were probably left from 1954. Set no. 1537WS included gray cars, but they have the new molded catch (to hold the cam in place), inside posts, and



coupler tab. They also have a larger figure (part no. 3562-62) with his hands and face painted.

Red-lettered cars are the rarest, but 1955 cars with a molded catch are harder to find than is thought. Also, some instruction sheets are

confusing because they were dated 1954 yet showed the “catch.” Actually, these are 1955 sheets with an incorrect date. Although not widely known, Lionel even painted gray cars with blue lettering over silver plastic bodies.

3562-50 OPERATING BARREL CAR (yellow): 1955-57

Introduced in 1955, the yellow barrel car is illustrated on the front cover of the consumer catalog as part of three sets, though one of them (no. 1537WS) really included a gray car. However, the no. 3562-50 was a component of at least four cataloged sets (nos. 1533WS, 2237WS, 2249WS, and 2251W) and possibly no. 2245WS.

These cars have black heat-stamped lettering and a larger figure (part no. 3562-62) with his hands and face painted. The earliest production of these cars probably was the painted version, as Lionel kept its promise of producing models with

vibrant colors. The 3562-50s were painted over gray plastic and have the molded catch.

Various shades of yellow-painted barrel cars have been identified, with yellow-orange being the most vibrant. Before long, Lionel began molding the cars out of yellow plastic to save time and money.

In 1956, only the yellow plastic car was produced, and the specs were about the same as before. The only noticeable difference is the knuckle pins, which are shiny and not blackened. The new Late Classic box, in which the 3562-50 was packaged, has the numbers omitted from all four sides.

3562-75 OPERATING BARREL CAR (orange): 1957-58

Molded in orange plastic, with black heat-stamped lettering, the no. 3562-75 was the last barrel car produced during the postwar era. Included in two cataloged sets in 1957 and one in 1958, it was also offered for separate sale during both years for \$9.95.

The car and the box include the “-75” suffix. Models have a shiny knuckle pin and mixed combinations of coupler tabs and drawbars with a support hole. Lionel depleted inventory by including this car in uncataloged set no. X-225.

The correct figure has a painted face and hands. But he could be either the larger one or the smaller one. That’s because Lionel brought back the smaller figure for its operating boxcars in 1957 and may have used him on this barrel car.



The ins & outs of Lionel's

Operating



boxcars

by Joe Algozzini and Roger Carp

OPERATING BOXCARS have been favorites of Lionel collectors and operators for years, especially since so many current enthusiasts can recall having fun with these models when they were kids.

The first of these postwar cars appeared in 1946. Lionel announced two new versions of the old no. 3814 merchandise car. For the no. 3854, engineers installed the crate-ejecting mechanism inside the shell of a scale boxcar. They also placed that mechanism inside the smaller, silver-painted body of another car, the no. 3454.

Both merchandise cars were cataloged in 1946 and '47. By the latter year, however, they were overshadowed by the brand-new 3462 automatic refrigerated milk car.

The milk car remained the star of the Lionel universe. Not until 1949 did Lionel add another operating boxcar. Then the quintessential model – the simple yet fascinating no. 3464 – became a mainstay.

This item, a member of the 9½-inch family of boxcars, came decorated for the New York Central or Santa Fe. Its action consists of a blue railroad worker moving forward and greeting viewers from inside the car.

Another hit! So popular were the 3464s that they remained in the consumer catalog through 1952. For their final year, they enjoyed the company of the silver no. 3474 Western Pacific.

For 1953, Lionel cataloged a near-scale operating car. The no. 3484 was painted Tuscan and heat-stamped in white with a Pennsylvania Railroad keystone herald and lettering.

Next came the no. 3484-25 Santa Fe. Available as a cataloged item in 1954 and an uncataloged item the following two years, it used the same mechanism developed for the 3464.

The three operating cars shown in the catalogs for 1955 and '56 represented animated versions of models in the no. 6464 series of near-scale boxcars: nos. 3494-1 New York Central Pacemaker, 3494-150 Missouri Pacific, and 3494-275 State of Maine.

Equally as attractive and more difficult to find were the nos. 3494-550 Monon and 3494-625 Soo Line. Both were cataloged as separate-sale items in 1957 and '58.

More fun still was the no. 3424 brakeman car. A blue or white figure stands atop the blue Wabash car until passing the swinging plastic strands of a telltale. He falls forward to avoid being knocked silly by a bridge beam or tunnel portal. Then another telltale indicates it's safe to stand again, and he magically rises.

The final postwar operating boxcars returned to the principle behind the 3464 and its near-scale descendants. On the no. 3428 United States

mail car (new in 1959), a rubber bag of mail is secured to the figure by a magnet. Activating the car's mechanism causes the figure to jump forward with such momentum that the sack detaches as though he's flinging it to the ground.

The figure on the no. 3434 poultry dispatch (also new in 1959) moves forward with a rubber broom to sweep feathers out of the stockcar.

The U.S. mail and poultry dispatch cars remained in the line through 1960. Lionel brought back the 3434 in the mid-1960s. Then the wonderful group of postwar operating boxcars, detailed on the next five pages, was all but forgotten as kids turned to more action-packed toys.

For helping with this article, the authors wish to thank Bruce Balsley, Bill Banovitz, Sid Brown, Ed Dougherty, Don Fiore, Bob Ford, Don Herman, Bob Jacobson, Richard Kughn, and John White.

Lionel Postwar Operating Boxcars

Number	Rarity*	Estimated Production	Good**	Excellent
3424	U	40,001 to 50,000	\$39	\$95
3428	O	7,001 to 10,000	\$45	\$100
3434 (1959-60)	L	4,501 to 5,000	\$55	\$105
3434 (1964-66)	O	7,001 to 10,000	\$55	\$105
3454	O	7,001 to 10,000	\$65	\$115
3464	W	75,001 to 100,000	\$11	\$27
3464-50	W	75,001 to 100,000	\$10	\$24
3474 (1952)	M	5,001 to 6,500	\$25	\$65
3474 (1953)	J	3,001 to 4,000	\$25	\$65
3484	T	30,001 to 40,000	\$15	\$45
3484-25	P	10,001 to 15,000	\$33	\$90
3494-1	P	10,001 to 15,000	\$40	\$95
3494-150	K	4,001 to 4,500	\$55	\$100
3494-275	R	17,501 to 25,000	\$50	\$100
3494-550	H	1,501 to 2,600	\$120	\$395
3494-625	H	1,501 to 2,600	\$140	\$440
3854	H	1,501 to 2,600	\$180	\$390

*Listings of rarity, based on a scale descending from A to Z, are derived from actual or estimated quantities of regular-production items made by Lionel. A full explanation of these ratings including how production figures were ascertained appears on page 73 of Joe Algozzini, *Lionel's Postwar Space & Military Trains* (Kalmbach Publishing Co., 1996).

**Values for items in good and excellent condition are taken from the 2002 edition of *Greenberg's Pocket Price Guide to Lionel Trains*.

Five of the wonderful operating boxcars that Lionel cataloged during the postwar era. These colorful and collectible cars still amuse us with their neat animation.



3424 Operating Brakeman Car: 1956-58

The no. 3424 was the first operating boxcar to feature a figure (part no. 3424-33) placed outside the car instead of inside. Shown in advance catalogs as a "Tell-Tale" car with Baltimore & Ohio Sentinel markings, its true identity was revealed in the consumer catalog with the correct Wabash markings.

The plastic shell for the 3424 is the same as the one(s) used in the production of no. 6464 boxcars, except that an opening was punched in the roof to allow for the swinging action of the brakeman. The top of the shell also reveals the modification caused by the production of the no. 6352 ice car. In this instance, a thin line is visible to the left of the brake wheel and was caused by an insert placed in the boxcar mold that allowed for the ice car's swinging top hatch and side door.

The shell for the 3424 was molded in light, medium, or dark blue plastic, and the lettering was heat-stamped in white. The rubber figure is white or blue, with a painted face and hands. Outfit no. 1561WS usually contains a car with a white figure, whereas no. 2255W has generally been found to have a blue one. Even so, it's nearly impossible to determine which figure Lionel consistently used, except that white was more common.

Some key features distinguished 1957's production. A support hole was added to the top of the knuckle drawbar. The connecting wire to the power truck is yellow instead of black. Don't forget about transition – the introduction of new or changed parts not on a scheduled date but when the supply of old parts was exhausted. Finally, the signal pole was again molded in orange plastic, and the pole support was silver or black.

A common misconception holds that a 3424 with a white figure used a white pickup shoe and one with a blue figure used a blue shoe. If so, this was sheer coincidence.



3428 Operating Mail Car: 1959-60

The no. 3428 replaced the 3494 boxcars in the product line and, like the milk car, is a clever innovation. But this time the attendant tossed out mailbags instead of milk cans. The 3428 was offered in only one cataloged set each year and for separate sale at \$7.95, which was the same price as the cars in the 3494 series.

The 3428 was painted in a red-white-blue scheme, although the roof and ends were only painted red. The white-painted section has black heat-stamped lettering, whereas the other two have white heat-stamped lettering.

The majority of shells were molded in the same blue plastic as Lionel used for the no. 6464-275 State of Maine boxcar, so the two cars probably paralleled each other in production. The inside roofline for these shells is ribbed, and collectors call this a Type III boxcar. Gray shells with a smooth roofline were also used, with the lines for the no. 6352 ice car visible on the roof.

The figures for the 3428 are gray (part no. 3428-15) or blue (part no. 3428-18), with painted faces and hands. The mailbags were color-coded to match the figure – gray (part no. 3428-11) or blue (part no. 3428-22) – but could appear in opposite combinations.

Without Lionel's help, such as a production sample or two, we may never know for sure the exact color combination of mailbags and figures.



3434 Operating Chicken Car with Sweeper: 1959-60 and 1964-66

The no. 3434 was designed to replace the previous no. 3484/94 series that apparently wore out its welcome. Although the car's figure made for a new sweeping action, the operating mechanism's brittle interior design often broke down and left the attendant a dangling mess!

The 3434 was painted brown with white heat-stamped lettering. Since there was more than one production run, all shades from dark to light brown exist, but the darkest shades were likely made during the first two years.

The 3434 copied from the no. 3428, as either a gray or blue figure with painted face and hands was used. In 1959 and 1960, the trucks were die-cast (plastic AAR trucks may have been used during the final production run) and included a three-piece knuckle coupler. In 1964, AAR trucks were used with a Delrin one-piece coupler having a black or copper-colored leaf spring.

The text on the front page of the instruction sheets didn't change during the five years the 3434 was cataloged, but in 1959 and '60 it was printed with blue ink and in 1964-66 it was done in black. What's also very interesting, and shows that Lionel instruction sheets weren't always correct, was that the date on the back page of the 1964 sheet remained 8-59!



3454 Operating Merchandise Car: 1946-47

The first 9¼-inch operating boxcar made during the postwar era is the no. 3454 merchandise car. Incorrectly depicted in the 1946 catalog as brown with white lettering, it was actually painted silver with blue heat-stamped lettering. However, a small run of 3454s was heat-stamped with red lettering. These cars are rare, with fewer than a dozen reported.

In 1946 cars, the molded coupler ridge (head) that held the coupler armature plate in place is smooth, the connecting wires are blue, and the brass roof door (hatch) pin does not extend through the side of the car.

In 1947 cars, the coupler ridge is staked, the connecting wires are black, and the aluminum pin extends through the side of the car.

Each 3454 included six miniature packing cases (part no. 3814-53), with "Baby Ruth" molded on the cases. The cases came in three colors: burgundy, black, and red. Cases without any lettering date from the prewar era and were used with the no. 3814 merchandise car.

3464 New York Central Operating Boxcar : 1949-52 3464-50 Santa Fe Operating Boxcar : 1949-52

Lionel assigned two road names to its no. 3464 series: New York Central and Santa Fe. Although the New York Central wasn't shown in the 1949 advance and consumer catalogs, it was made and served as a key component of two sets: nos. 2139W and 2151W.

Evidence even suggests that the New York Central car was considered, if not made, before the Santa Fe. For instance, although 1949 boxes lack an inner tuck-flap number, the New York Central (starting in 1950) always had a lower number than a Santa Fe. Also, the part number for a New York Central shell is 3464-18 while a Santa Fe is 3464-31. Most important, the 1953 advance catalog identifies the Santa Fe as no. 3464-50.

The New York Central was painted tan, with white heat-stamped lettering. The Santa Fe was painted orange, with black heat-stamped lettering. Because of the number of boxcars needed to fill sets, more than one production run was made, which accounts for differences in the shades of paint.

Each car had two chemically blackened die-cast metal doors (plain is part no. 3464-20 and marked is part no. 3464-22). The Santa Fe car also used rare brown-painted doors.

In 1949, magnetic couplers were used in production, but some early New York Central cars apparently were assembled using outdated coil couplers and a metal washer on the rubber figure lever (part no. 3464-13). Also, the body changed slightly as rivet detail was removed just below the catwalk.

For regular production, both operating boxcars have the same 1949 features: frames with steps, "staple-end" truck sideframes, a flared activator flap rivet, and a figure (part no. 3464-17) with painted face and hands.

Because of the numbers of these cars needed to fill the six outfits cataloged with them as well as separate-sale orders, Lionel

apparently ran out of boxes or just ordered more in accordance with company policy. These new boxes are the same length but omit "San Francisco" from the design.

Lionel stamped a short run of tan-painted shells (used for the New York Central cars) for the Santa Fe. Reported to be service station replacement shells, these tan Santa Fe 3464s are extremely rare.

In 1950, the New York Central was again omitted from the consumer catalog but appeared as part of several sets in the advance catalog. Both 3464s experienced changes, as the steps were removed from the frame (although a new box for 1950 was still the same length as in 1949), the flared rivet was turned around with the round end showing, a hole was punched in the activator flap, and the figure was no longer painted.

In 1951, the features for both 3464s are the same as before. Toward the end of the year, the frame was changed, as three holes and the slot (where the base assembly for the no. 3472 automatic refrigerated milk car was attached) were removed.

Finally, in 1952, Lionel introduced black plastic doors to the no. 3464/74 series, although the *Lionel Service Manual* is misleading in regard to the correct year.

Much has been written about which 3464 was made first and which road name was placed in which sets. However, both road names were 1949 production line items.

We don't know how Lionel packed sets. Catalogs are no help, and an "X" or another distinguishing mark wasn't stamped on the boxes. So until relevant documents or authoritative information is found, we won't know for sure whether Lionel placed boxcars randomly or if it tried to put Santa Fe cars with Santa Fe F3s and New York Central cars with New York Central F3s and Pennsy GG1s.



3474 Western Pacific Operating Boxcar : 1952-53

Introduced in 1952, the no. 3474 had an auspicious beginning, as the advance catalog depicted it as part of three sets and a separate-sale item priced at \$5.50. By the time Lionel released its consumer catalog, however, the 3474 was correctly illustrated as part of only one set, 1483WS. Although no longer shown for separate sale, the box was letter-pressed with the \$5.50 OPS information.

In the consumer catalog, the 3474 was incorrectly illustrated as a white boxcar. Actually, it was painted silver, with black heat-stamped lettering. The yellow-orange feather and the slogan "Rides Like A Feather" are part of decal set no. 3474-7.

The 3474 uses the same 1952 features as the no. 3464 operating boxcar, except that the black plastic doors were painted to match the Western Pacific scheme. In 1953, the no. 3464-17 figure was reduced in size, the shiny truck pivot studs were phased out in favor of blackened ones, and the box omitted the OPS information.



3484 Operating Boxcar (Pennsylvania): 1953

Included in three cataloged sets and offered for separate sale, the no. 3484 is the most common of all of Lionel's large postwar O gauge operating boxcars. This is understandable since it carried the famous Pennsy name, thus making the separate-sale item the perfect addition for the thousands of satisfied customers who owned a Lionel Pennsylvania steam turbine.

Like the other O gauge operating boxcars, the shell for the near-scale 3484 is the same as was used in the production of the popular no. 6464 boxcars. The 3484 was painted Tuscan and features attractive white heat-stamped lettering.

The doors on this operating boxcar were also painted Tuscan and use the early design of having only a single large block. The rubber

figure (part no. 3464-17) is the same as Lionel used with the no. 3474 Western Pacific car. It is the smaller figure without painted face and hands.

Because the 3484 was included in so many sets, there had to be more than one production run. This would account for the several shades of Tuscan, of which dull (flat) and glossy are the most collectible.

In addition, sometime during the final production run (possibly in the last quarter of the year), a nick developed on the mold and left a slight flaw in the car's roof. This imperfection continued until Lionel started using a new mold in 1958. Although most 3484s were made without the imperfection, it does distinguish those examples made in the last run.



3484-25 Operating Boxcar (Santa Fe): 1954-56

Of the postwar O gauge operating boxcars, the no. 3484-25 is the most misunderstood. That's because it was illustrated in only the 1954 catalogs, yet was also part of two uncataloged sets available from Sears, Roebuck & Co.: nos. 505X from 1955 and 9606 from 1956.

The 3484-25 is not as scarce as collectors are led to believe, as Lionel took advantage of the Santa Fe's popularity, much as it had done in 1953 with the Pennsylvania. To be specific, there was more than one production run, which led to the existence of several variations of this car.

These operating boxcars were painted in several shades of orange, with dull and glossy being the variations that are most often recognized by collectors. The same is true with the larger single-block door, as either dull or glossy orange is also most widely identified.

As depicted in the full-color consumer catalog for 1954, the first Santa Fe cars have black heat-stamped lettering and use the Type I body (four complete rows of rivets to the right of the sliding door). But this rare variation was short-lived, as Lionel soon began heat-stamping the lettering in white.

However, for some unknown reason, Lionel complicated the issue by rubber-stamping the lettering in white. Then, to make the application of graphics easier – but to confuse collectors still further – it introduced the Type II body (with only three complete rows of rivets to the right of the sliding door).

In 1954, the smaller figure that Lionel introduced the previous year was used, but the face and hands were painted. This change provided more color, as promised in the consumer catalog. However, Lionel wasn't through complicating the issue, as the last cars made included a larger figure (part no. 3562-62), introduced at the end of the 1954 production year.

Two other changes occurred earlier in 1954. First, the top of the metal knuckle was engraved instead of smooth. Second, a raised area replaced the washer where the truck pivot stud fastened to the frame.

In 1955, set 505X was packaged late in the year, as inspection of the Santa Fe boxcar's features reveal. Even though the use of leftover inventory was a possibility, the 3484-25s had coupler tabs (new in 1955), shiny coupler pins (introduced in late 1955), and multiple-block doors (made for the new no. 6464-275 State of Maine boxcar).

Also, some examples are painted over red plastic shells (from the new no. 3494-1 New York Central Pacemaker operating boxcar). More telling, the roof on these Santa Fe cars has the visible line to the left of the brake wheel caused by production of the new no. 6352 ice car.

For 1956, the 3484-25 has the same features as in the previous year. However, it was packaged in the Late Classic box, which Lionel introduced that year. It was also a component of another uncataloged set from Sears, no. 9693, which isn't as widely known as the other two.

3494-1 Operating Boxcar (New York Central): 1955

Introduced in 1955, the two-tone operating New York Central Pacemaker, like its no. 6464-125 counterpart from the year before, is a favorite. Since it was made earlier in the year than the no. 3484-25, the New York Central car retains earlier 1955 features, including black knuckle pins and single-block doors. Some, but not all, examples have the new coupler tabs.

The no. 3494-1 (the "-1" was not on the box) has white rubber-stamped lettering and the larger rubber figure introduced in late 1954. The tiny mark dangling from the third letter in the word *SYSTEM* is often referred to as a "cedilla." The mark was probably caused by a defect in the rubber-stamping.

3494-150 Operating Boxcar (Missouri Pacific): 1956

One of the more colorful and collectible of the O gauge operating boxcars, the no. 3494-150, debuted in 1956. For production, Lionel used a gray plastic shell and masked off and painted the top and bottom areas blue. Rubber-stamping was still used, as the gray area was stamped with black lettering, whereas the blue area was stamped with white. This car still uses the multiple-block doors and the larger figure.

Perhaps surprisingly, the Missouri Pacific operating boxcar is almost as hard to find as the highly desirable nos. 3494-550 Monon and 3494-625 Soo Line that collectors so avidly seek.



3494-275 Operating Boxcar (State of Maine): 1956-58

Lionel took advantage of the State of Maine's eye-catching red-white-blue scheme by offering an operating version to go with its non-operating type (no. 6464-275).

Early shells were molded in Navy (scarce) or Royal (common) blue plastic, although the latter became the primary color. The shells were masked off, with the two lower areas painted red and white, respectively. Black rubber-stamped lettering was used on the white stripe, and white heat-stamped lettering on the other two.

The first cars were made without the 3494-275 stamping below the B.A.R. These cars are rare. Unique is a State of Maine with 3494-275 on only one side and B.A.R. on only the other.

For 1956 production, a push clip replaced the horseshoe clip that fastened the truck pivot stud to the sheet-metal frame. In 1957, a support hole was added to the coupler drawbar toward the end of May, and soon after the frames were made with two holes (different from those on the no. 3424) punched out.

However, the most noticeable change was the return of the smaller figure with painted face and hands. For 1958, the cars offered for sale then were leftover inventory.

3494-550 Operating Boxcar (Monon): 1957-58

The handsome no. 3494-550, the pride of the Hoosier Line, is a favorite with collectors and operators. Along with the no. 3494-625, it is the most difficult of the regular-production operating boxcars to find. For both cars, Lionel used 6464 suffix numbers.

On the Monon car, the shell and the doors were molded in maroon plastic, with a white stripe painted across the top. Red lettering was heat-stamped into that stripe, and the graphics for the unpainted section were heat-stamped in white.

The no. 3494-550 uses the same features as the no. 3494-275, and those Monon cars offered for sale in 1958 were leftover inventory from 1957.

Some examples have only a few visible specks of the built data stamped to the left of the sliding door. Although just an error in the manufacturing process, enough examples are known to exist (unlike most factory errors, where only one or two are known) to justify listing this error as a collectible variation.

3494-625 Operating Boxcar (Soo Line): 1957-58

The last of Lionel's basic operating boxcars, the no. 3494-625 was offered for separate sale only when it was introduced in 1957. The same was true when it was cataloged again the following year.

The Soo Line car is another of the most coveted of postwar Lionel rolling stock. It was painted brown over a maroon shell, and the graphics were heat-stamped in white. The frame and figure features are the same as found on the other two operating boxcars offered in 1957, with no major variations other than the different shades of brown or reddish brown paint.



3854 Operating Merchandise Car : 1946-47

Introduced in 1946, the no. 3854 is a postwar car based on a prewar model. In fact, both the advance and consumer catalogs depicted it with Pennsylvania lettering to the left of the sliding doors, when in reality it was stamped "Automatic Merchandise Car."

The 3854 was made of Bakelite and painted brown, with white heat-stamped lettering. In 1946, Lionel experimented with brown-painted (harder to find) and chemically blackened doors before deciding that black was the better choice. It also installed non-staked couplers in 1946 before staking them the following year.

A remote-control track section was needed to operate a 3854. Because of the merchandise car's length, each truck was equipped with two pickup shoes. Some early examples may have had only one shoe before Lionel realized the problem.

They're everywhere!

Lionel's postwar SP-type cabooses

by Robert A. Swanson | photos by William Zuback

Sooner or later, most Lionel postwar enthusiasts become interested in cabooses. It just happens. That's because when many of us entered the hobby, we bought sets from the original owners. We may not have wanted the entire set – just the locomotive or an operating car caught our eye – but we ended up with the whole set, caboose and all.

Then, being logical and organized, we arranged our trains on shelves. The locomotives might be put on a layout and special cars given places of honor elsewhere. Cabooses were set aside until they filled entire storage areas. They were a nuisance and took up valuable space.

About 15 years ago, some of us realized that not all Lionel cabooses were the same. We started to study them, especially the SP-types (those with square, offset cupolas modeled after cabooses that were used on the Southern Pacific railroad), and discovered interesting variations in color and detail. Some of those variations are very rare and that makes them valuable.



▲ The saga of Lionel's postwar SP-type cabooses begins with the no. 2257 in 1947. Above you see a brown caboose with a smokestack and ladders (most highly desirable) and a red version with a smokestack and ladders (highly desirable).

◀ The most common types of the 2257 SP-type caboose are the red-orange version (front) and the red (rear).





1947: Variations from the start

Lionel revealed its intention to produce a “new” plastic-shelled caboose in its advance catalog for 1947. However, problems with current products required tooling modifications that were given priority over the new caboose. As a result, when the consumer catalog came out in the autumn of 1947, the project was apparently so far behind schedule that Lionel decided not even to mention it.

Although the new SP-type caboose isn’t described or illustrated in the 1947 catalog, it was produced and placed in some sets. And almost immediately, variations started to appear.

O-27 sets used a no. 2257 red-painted, non-illuminated model without ladders, toolboxes, or a smokestack. O gauge sets used a no. 2357 brown-painted, illuminated caboose with ladders, toolboxes, a smokestack, a rear coupler, and “window shell” (a clear plastic insert placed inside illuminated models to simulate glass in the window openings).

But Lionel evidently began production before it had decided on those “standards.” Examinations of hundreds of SP cabooses reveal that some brown models were stamped “2257,” while some red ones were stamped “2357.”

Also, Lionel didn’t use just one shade of red paint in 1947. Three have been reported, starting with a “pure” red commonly found on 2257s without a smokestack. The second is a red-orange infrequently used on 2257s with or without a smokestack. The third is a

tile-red seen on some 2357s without a smokestack. This last color is the common color for 6257s and 6357s cataloged between 1948 and 1952.

Lettering is another source of variations in 1947 production. Heat-stamped is typical. However, rare examples of the 2257 (either red-orange or brown with smokestacks) have been reported with rubber-stamped lettering.

Metal frames provide a final source of variations. Production started with brake wheels (facing toward the platform) attached to the metal handrails at both ends of the caboose.

Lionel soon found that inward-facing brake wheels caused assembly problems. The plastic caboose body could be angled past the brake wheel at one end, but the handrail had to be bent out to slip the body past the brake wheel at the other end. However, if the handrail was bent too far, black paint would crack, flake off, and expose bare metal. If the handrail wasn’t bent far enough, the brake wheel would scrape paint off the plastic body as it went by.

Lionel’s first solution was easy – leave the brake wheel off one end of the frame. A few brown 2357s have been reported with only one inward-facing brake wheel (and no evidence that another was attached to the other end).

Still, the absence of brake wheels left the O gauge models looking incomplete. So Lionel attached an outward-facing brake wheel at each end. The plastic body could now be secured to the frame without any interference from the brake wheels.

1948: Five numbers

Lionel officially introduced its SP-type caboose in the consumer catalogue for 1948. It carried one of five

▲ Lionel cataloged the no. 2357 in 1947 and ‘48. Clockwise from left rear: brown with a plastic smokestack (most common version), brown with a metal smokestack (very rare), tile-red without a smokestack (desirable), and red with a plastic smokestack (most desirable).

numbers, depending on its feature level and the set with which it was sold.

The no. 1007, the “base” model, was included in both Scout sets. The non-illuminated no. 6257 came in three low-end O-27 outfits, while the illuminated no. 6357 completed three expensive O-27 sets. Five O gauge sets contained the 2357. The top-of-the-line no. 4357 caboose was a component of the no. 4110WS Electronic Control Set this year and next (1949 was the last year Lionel manufactured this set, although it was shown in the 1950 catalog).

Production and design standards missing in 1947 had generally been established by 1948. Nevertheless, several notable variations did occur. The first and most valuable of these is a 6257 painted tile-red and equipped with a matching plastic smokestack.

Unfortunately, fraudulent versions

▼ A few 2257 cabooses (painted brown or red-orange) were given rubber-stamped lettering like this example.



of this desirable caboose have been observed. To determine whether a model is original, examine the inside of the body where the plastic smokestack penetrates the roof. The C-shaped plug of the smokestack should mate perfectly with a “key” molded in the non-circular roof hole.

A second variation involves mounting leftover tile-red 2357 bodies on either 1947 frames with coil-coupler trucks, or on 1948 frames with magnetic-coupler trucks. Lionel then identified these models as 6357 cabooses by rubber-stamping “6357” on the frame with silver ink. It also over stamped 2357 boxes with “6357” in black ink.

A new caboose-shell mold created the final variation. The original tool for producing SP-type caboose bodies was a two-cavity mold developed in 1947. Every time the mold was filled with molten plastic, it produced two nearly identical bodies. The only differences were slight variations in the location of several rivets.

Lionel assumed the two-cavity mold would provide adequate production capacity for 1947 and afford the capacity for future growth. However, the introduction of the inexpensive Scout sets the next year enhanced sales. More production capacity for cabooses was needed.

Also, Lionel molded its Scout cars out of colored plastic to eliminate painting costs. However, because of the thin entrance gates on the two-cavity tool, the absence of paint exposed some plastic “flow lines.” A new tool (known as “mold 3”) solved this problem with a large central gate on the underside of the roof, just forward of the cupola.

The unique external feature of mold 3 is the presence of an extra (raised) center board on the roofwalk, about ½ inch from the front end of the roof. No

▼ Examples of three SP-type cabooses from 1948 made using mold 3 (with an extra board on the roofwalk). Left to right: nos. 1007, 6357, and 4357.



▲ Four different graphics for no. 6257 cabooses (left to right): Reversible “Lionel” left, reversible “Lionel” right, circled-L logo, and “SP” lettering.

plausible explanation for this detail has appeared, and Lionel soon removed it (and the roof ladder slots) from the mold. Use of this “extra board” version of the mold has been observed on only the 1007, 4357, and 6357 cabooses.

Another desirable variation is a 1007 molded in brown plastic from the later mold 3 that has no extra board or ladder slots. Body mold and truck details suggest that cabooses of this nature were produced in 1951 or ’52, when Lionel was finishing its Scout sets.

Perhaps Lionel molded a few 1007s in brown to see what the unpainted no. 6017 planned for 1953 would look like. Or maybe a few brown bodies were made in 1953, stamped “1007,” and sent to authorized service stations as repair parts. Either way, not many were made and fewer still have survived.

1949-52: New couplers and smokestacks

The 6257 continued to be stamped with “SP” below the cupola through 1952. Examples were painted tile-red

(red-orange versions date from 1948). They continued to feature two brake wheels until Lionel decided to manufacture the 6257 with only one in 1950.

Production of the 6357 was fairly constant during 1948 to 1952 once the silver-stamped frame and mold 3 variations were out of the way. Like the 6257, this O-27 model came with only a single brake wheel starting in 1950.

Lionel replaced the O gauge 2357 with the no. 6457 in 1949. Other than a new number and the replacement of the “SP” under the cupola with the Lionel circled-L logo, the brown 6457 was identical to the 2357. Lionel changed the number to reflect its conversion to magnetic couplers.

Changes to the smokestack deserve attention. Production of the 6457 began with the same plastic stack used on the 2357s and 4357s. This fragile part was easily broken. Lionel had to make many repairs, as shown by the number of 6457s with wide-radius, irregular glue fillets between the roof and stack. The fillets have been painted with a matching brown, indicative of a factory repair.



► Here are four examples of the no. 6357 SP-type caboose, a mainstay of the Lionel lineup between 1948 and 1961. Clockwise from left rear: Maroon with a number on left (1956-57 and 1960-61), maroon with a number on right (1958-61), tile-red with "SP" lettering (1948-53), and red-brown with circled-L logo (1953-56).



To solve the breakage problem, Lionel replaced the plastic smokestack with a die-cast metal smokestack first developed for the prewar die-cast scale caboose (part no. 717-14). At first, laborers inserted the smokestack in an unpainted plastic caboose body and painted both parts as an assembly, as they had done when using plastic smokestacks.

This change left workers with a painting problem. Too little paint in the smokestack crevices left bare metal; too much paint caused drips and runs. Achieving the right amount proved difficult. The answer involved chemically blackening the smokestacks in a separate process, and painting the bodies before assembly.

One well-documented example of a 6457 without a smokestack has surfaced. It came as a component in a no. 2151W F3 freight outfit purchased complete in the original set box, with all equipment, paperwork, and component boxes in like-new condition.

The brown caboose is clearly marked "6457" on both sides and has the circled-L logo. Except for a smokestack, it boasts all the premium features associated with the 6457 (ladders, toolboxes, etc.). The body as molded was intended for a 6257 or 6357 because it has no hole in the roof, just the raised rim plug typically found on those two models.

Three variations of the 6457 with a smokestack have been identified: brown plastic, brown metal, and black metal. The last variation became the standard for 6457 production in 1950 and '51.

During 1952, the body color was

changed slightly to a red-brown. Lionel designated this color variation by stamping the orange-and-blue box with the number "6457-25."

1953-64: Final years for a classic

The year 1953 represented a turning point for cabooses. Lionel stopped making the 6457, replacing it with the new no. 6417 Pennsylvania porthole caboose in the O gauge line and promoting the 6357 to the top position among the SP types (used in both high-end O-27 and low-end O gauge outfits). The 6257 remained a part of the O-27 roster, with its "SP" lettering being replaced by a circled-L logo.

The color of the 6257 also changed. The tile-red version eventually gave way

▲ Four examples of the no. 6457, which featured interior illumination, metal ladders, two brake wheels, and a window shell when it was cataloged (1949-52). Clockwise from left rear: Brown with a brown die-cast metal smokestack (most common), brown with a black die-cast metal smokestack (most desirable), and brown with a brown plastic smokestack.

to pure red. During 1955, Lionel quit painting this bottom-of-the-line caboose. Now the body was molded directly from red plastic, just as Lionel had done with its Scout cabooses. The circled-L logo was eliminated during 1956, and the 6257 was dropped from the line after that year only to be brought back in 1963 and '64 with a die-cast metal smokestack.

The 6357 received a die-cast metal smokestack in 1953. It also received two new colors in quick succession. The

▼ Two of the most desirable no. 6357 caboose variations are one with a die-cast metal smokestack painted maroon to match its body (left), and one lettered "AT&SF" from the no. 2555W "Father and Son Set" from 1960.





▲ At the low end of the SP caboose spectrum were no. 6017s that typically came unpainted and without a smokestack, rear coupler, or ladders. These four, however, were painted (clockwise from left rear): U.S. Navy (1960), tile-red Lionel Lines (1951-62), AT&SF (1962), and Boston & Maine (1959, 1962, 1965-66).

▲ Other stripped-down versions of the SP caboose from the late postwar years included these four examples (clockwise from left rear): Numbers 6059 Minneapolis & St. Louis (1961-69), 6167 unmarked (1963-64), 6027 Alaska (1959), and 6017 U.S. Marine Corps (1958).

first was the red-brown of the final 6457. Lionel soon substituted maroon, which remained the rule until the 6357 was deleted after 1961.

The “SP” lettering gave way in 1953 to the circled-L logo, which lasted through 1956. Lionel eliminated that logo in

1957 in favor of “reversible lettering” (the heat-stamping was below the side windows, so workers could use the same stamp for both sides of the caboose).

Lionel started using the die with “6357” to the left and “Lionel” to the right in 1957. Sometime in 1958, it

switched to a die with “6357” to the right and “Lionel” to the left. Caboose produced in 1960 and ’61 might have the number on either side.

A desirable variation of the 6357 has a die-cast metal smokestack painted maroon to match its body. This is a bit puzzling because Lionel stopped painting stacks in 1949, and the trucks and graphics of this model date it to 1954-56.

About a dozen of these cabooses have been discovered, but always as a separate-sale item rather than a set component. Lionel may have made this body as a repair part for distribution to service stations, but the evidence seems inconclusive.

Better known is the desirable version of the 6357 that Lionel produced as an exclusive component of outfit no. 2555W, cataloged in 1960 only and known as the “Father and Son Set.” This bright red caboose is lettered “AT&SF” to match the twin O gauge no. 2383 Santa Fe F3 diesels that came in the set. This unique and scarce set also came with a matching Lionel HO scale Santa Fe train.

Too bad that Lionel removed the details that formerly made this model a premier part of its O-27 and O gauge lines. Fortunately, collectors and operators still cherish these SP-type cabooses and recall their early splendor. **CT**

The author thanks Joe Algozzini, Mark Stephens, Alan Stewart Jr., Phil Stuhltrager, Jack Swanson, and Bill Vaughn for their help.

More caboose wonders

ALTHOUGH Lionel cataloged SP-type cabooses for many years after it quit producing the 6457 at the end of 1952, the lineup never again had much to distinguish it. They played second fiddle to the porthole and bay-window cabooses.

From 1953 on, the SP cabooses suffered a series of modifications intended to wring every last cent out of the design. Lionel rarely painted them and, depending on the model, reduced or eliminated graphics. Plastic trucks were substituted for metal ones. Ladders, toolboxes, rear couplers, stacks, brake wheels, and end handrails eventually disappeared to reduce costs.

There are two exceptions to the “cost-reduction” trend among the later SP cabooses. The first was the no. 6657 Denver & Rio Grande Western model cataloged in 1957 and ’58. It



featured a stunning silver and yellow paint scheme. The most desirable variation has no ladder slots in the roof overhang. Slots weren’t needed since no ladders were available in 1957.

The second was the no. 6557, which sought respectability with the inclusion of a liquid smoke unit. Introduced in 1958, this drab model isn’t attractive. Maybe that’s why it was gone after another year in the line.

Lionel might have had a winner if it had combined these two models to produce a smoking Rio Grande

caboose. Someone at the company actually thought about doing so because on page 4 of the *Lionel Service Manual* dated 6-60, the body for a Rio Grande smoking caboose is identified as part 6657-9. At least one smoking Rio Grande caboose has been seen, but proving factory authenticity is difficult.

But the 6557 and 6657 died quietly, and stripped-down versions of the SP-type caboose remained in the Lionel line through the end of the postwar era in 1969 (see the accompanying chart). — Robert A. Swanson

Lionel Postwar "Low-End" SP-Type Cabooses (1950-69)

Number*	Produced	Color**	Name	Very Good***	Like New
6007	1950	Red (p)	Lionel Lines	\$7	\$15
6017	1951-62	Brown	Lionel Lines	\$4	\$8
		Gloss brn (p)	Lionel Lines	\$75	\$200
		Semi-gls brn (p)	Lionel Lines	\$40	\$100
		Red	Lionel Lines	\$6	\$12
		Maroon (p)	Lionel Lines	\$7	\$15
		Lt tile red (p)	Lionel Lines	\$7	\$15
		Dk tile red (p)	Lionel Lines	\$7	\$15
		Brown (p)	Lionel Lines	\$4	\$8
6017	1956	Gls maroon	Lionel	\$30	\$75
6017-50	1958	Dk blue (p)	USMC	\$30	\$75
6017 (-85)	1958	Lt gray (p)	Lionel Lines	\$30	\$75
6017 (-100)	1959	Dk blue (p)	B&M	\$400	\$900
	1959, 1962	Lt blue (p)	B&M	\$15	\$50
	1965-66				
6017 (-185)	1959-60	Gray (p)	AT&SF	\$25	\$50
6017 (-200)	1960	Lt blue (p)	US Navy	\$50	\$125
6017 (-235)	1962	Red (p)	AT&SF	\$30	\$75
6027	1959	Dk blue (p)	Alaska	\$45	\$100
6037	1952-54	Brown	Lionel Lines	\$4	\$8
		Red	Lionel Lines	\$25	\$65
6047	1962	Coral	Lionel Lines	\$25	\$65
		Md red	Lionel Lines	\$4	\$8
		Brown (p)	Lionel Lines	\$250	\$700
6057	1959-62	Red (p)	Lionel Lines	\$40	\$100
	1969	Coral	Lionel Lines	\$25	\$65
		Md red	Lionel Lines	\$7	\$15
6057 (-50)	1962	Orange	Lionel Lines	\$15	\$40
6058	1961	Dk yellow (p)	C&O	\$25	\$65
6059	1961-69	Red (p)	M&StL	\$15	\$30
		Md red	M&StL	\$5	\$10
		Dk red	M&StL	\$5	\$10
		Maroon	M&StL	\$7	\$15
(6067)	1961-62	Red	Unmarked	\$4	\$8
		Yellow	Unmarked	\$15	\$25
		Brown	Unmarked	\$25	\$60
	1963-64	Red	Lionel Lines	\$6	\$12
		Red (p)	Lionel Lines	\$75	\$200
(6167)	1963-64	Red	Unmarked	\$6	\$12
		Yellow	Unmarked	\$15	\$45
	1964	Olive	Unmarked	\$225	\$600
	1963-64, 1969	Brown	Unmarked	\$25	\$60
6167 (-85)	1963-66	Yellow	Union Pacific	\$12	\$30

* Stock numbers in parentheses do not appear on the body of the caboose.

** Caboose is unpainted unless indicated with "p".

*** Values for items in very good and like new condition are taken from the first volume of *Greenberg's Guide to Lionel Trains, 1945-1969* (2001 edition). Robert Swanson notes that asking prices over \$2,000 have recently been seen for glossy brown no. 6017 cabooses.



Rails 'n'

by Terry Thompson | photos by William Zuback

LIONEL, BEING A CREATIVE toy maker, recognized the appeal of animals to kids. That's why it cataloged freight cars related to beasts almost from its start. The menagerie on wheels really grew during the postwar years. Let's take a look at the colorful and collectible models, including operating cars, that Lionel offered between 1949 and 1966.

Taking stock

Stock cars have been a staple of three- (and two-) rail freights since the beginning of toy trains. Lionel introduced its first Standard gauge cattle car, no. 13, in 1906. Nine years later, when Lionel brought out its first O gauge trains, it offered not one but two cattle cars in this smaller line, the nos. 802 and 821. From then until toy train production was halted by wartime demands in 1942, stock cars remained in the O gauge line.

When Lionel introduced its postwar train line, one of the highlights was a new cattle car. The detailed 9½-inch-long car, which featured a durable plastic body on a stamped metal frame, came first as an operating version (the orange no. 3656, introduced in 1949) and then as a non-operating model (the yellow no. 6656, cataloged from 1950 to 1953). A non-operating version with an orange body, no. 6646, was cataloged in 1957 only. All of these cars were prototypically proportioned, if smaller than scale, and came in realistic, "railroad" colors.

With the advent of the 3656, a Lionel stock car finally came with cattle. Even better, the cattle moved. Although the plastic steers were balky at times, they provided Lionel railroaders everywhere with authentic cargo and a logical reason to stop their redball expresses.

The 3656 was a *bona fide* hit for Lionel, remaining in the catalog through 1955. Many observers consider it to have been nearly as significant a development as its famous contemporary, the no. 3462 operating milk car. The pair of bovine action cars brought

animation to the line in a new way, and the wave of figure-carrying cars that followed cemented Lionelville's place once and for all as a land of activity.

The short stock cars are memorable for another reason: They were nearly the last attempt Lionel made at bringing realism to its livestock cars. With a few exceptions, from this point on whimsy ruled the roost.

Bigger is . . . stranger?

Of course, by the mid-1950s, the situation at Lionel itself was, well, different than it had been through the firm's glory years. Sales were falling, management was scrambling, and product planners were introducing anything they thought could stem the slide (care for a stereo camera, anyone?). The new livestock cars were no exception.

During those years Lionel introduced a pair of larger stock cars. First came the no. 6356, a non-operating car painted yellow and lettered in black for the New York Central. Lionel cataloged it in 1954 and '55. Aside from being a model of a less-common double-decker, the 6356 was a typical stock car (as was its scarce cousin of 1958, the no. 6556, which was decorated for the Missouri-Kansas-Texas).

With the no. 3356 (cataloged from 1956 to 1960 and 1964 to 1966), Lionel stretched the boundaries, but still didn't break from tradition. The big green Santa Fe car carried horses instead of the more common cattle. Plus, the car's operation was more reliable than that of the 3656. The corral had a gently curved track rather than sharply angled gates, and on the new car the doors flipped down to form ramps. The fact that the

Watch out! It looks as though some pretty dangerous animals have escaped from a zoo and are wandering amid some of the O gauge cars Lionel produced in the postwar era to transport domesticated and wild beasts. Collecting and operating these colorful models is a lot of fun. Trains courtesy Sommerfeld's Trains, Butler, Wis.



tails



Lionel's wacky
postwar animal cars





So why not giraffes, too? Lionel thought these long, tall crowd-pleasers would be perfect, so its engineers created the no. 3376 car from the shell of a small stock car to hold a frisky giraffe that stuck its head out the roof when activated. Farther back is a no. 6473 horse transport car.



3356 came in green, not ATSF Mineral Brown, was perhaps more of a concern for the most realism-oriented Lionel rail-roaders, but they probably weren't the customers buying operating horse cars.

In 1956 and '57, Lionel offered a gaudy circus stock car, the no. 6376. In hindsight, this white-and-red version of the 6356 really foreshadowed unusual things to come. But again, the car was plausible; circuses of the time did travel by rail, though not a carload at a time.

After that first circus car, though, the

Cows and horses were run-of-the-mill fare by the late 1950s. That's when Lionel began cataloging cars that carried chickens and fish. The animated no. 3434 car (middle) even had a figure that appears to be sweeping out the poultry car. This car and the no. 3435 traveling aquarium car in front are favorites of toy train lovers.

boys in the Lionelville livestock department got a bit flighty. The 1958 and '59 catalogs featured the no. 6434 poultry dispatch car. This scale-sized red car was similar to one featured in a late 1940s *Model Builder* construction article, and a prototype probably existed – somewhere. A chicken car wasn't typical, however, and Lionel stretched its plausibility even more by giving the car an illuminated interior. (Maybe the chickens needed a reading lamp?)

The 1959 catalog introduced an operating version of the poultry dispatch car, the no. 3434 (cataloged through 1960 and 1964 to 1966). Scale-sized chickens would be too small to "walk" around a corral, of course. Instead, Lionel engineers gave this car a figure "sweeping" its interior. Did the world of toy trains really need that charming image?

Also new in 1959 was an operating circus horse car, the no. 3366, which was cataloged through 1961. The car, a white-and-red version of the 3356, came with a matching corral.

Off the deep end, then home

The oddest new animal car in the line for 1959, though, was the no. 3435 traveling aquarium. This green car, featuring a new body with four clear plastic "windows," a Vibrotor mechanism based on that in the no. 3444 animated gondola, and "swimming" fish printed on a loop of film, is a real crowd-pleaser.

The 3444 remained in the catalog until 1962, with a few desirable variations existing. There were aquarium cars on American railroads, but seeing one in the average freight train was about as likely as finding Casey Jones at the throttle of a Virginian Train Master. Had the planners at Lionel gone to the dogs?

More likely, they had taken a trip to the zoo, as the 1960 catalog announced the no. 3376 operating giraffe car, "a circus on wheels . . . a delight for the whole family." Known as the Bronx Zoo car, the 3376 features a giraffe head and neck protruding through the roof of a stock car. As the car passes a telltale, (a modified version of those included with the no. 3424 operating brakeman car), a bracket attached to its base pushes the car's operating lever up and the giraffe ducks his head inside.

Prototypical the 3376 wasn't, but amusing it was. Two engineering mock-ups at the Lionel Corp.'s archives indicate that Lionel considered a giraffe car with one and then a pair of bobbing heads attached to the roof. More fascinating is a preproduction model of a long flatcar with "jumping gorillas" placed inside a silver metal cage.

The body used for the 3376 is a reworked version of the first 9½-inch postwar stock cars, but with fixed doors and a hole in the roof. Lionel offered the Bronx Zoo car through 1964, with most versions having a blue body and white lettering (some came with a green body and yellow lettering).

Another version, the 3386 (depicted in the advance catalog for 1960 only), is also blue and white but has fixed-coupler arch-bar trucks. The 3376 returned in 1969, this time in blue with yellow lettering. (Lionel also produced an HO giraffe car, apparently hoping that scale railroaders had a sense of humor.)

The final animal car was closer in spirit to the first. The no. 6473 horse transport car, first cataloged in 1962,

uses a modified version of the 9½-inch stock car body, this time with a full roof but with two windows on each side.

A pivot arm inside the car has four plastic horses' heads mounted on it, two at each end. As the car moves, the arm swings from side to side and the horses "look" out the windows, adding animation at the cost of only a minor increase in complexity over a standard boxcar. The 6473 survived through 1966 and then reappeared in 1969.

Animal cars today

For the most part, Lionel's animal cars are neither the most realistic of the postwar freight cars nor the most valuable. (Given the range of oddities in the late postwar line, though, they probably aren't the least realistic, either, which is a jarring thought in itself.)

However, these O and O-27 gauge cars have proved to be so charming and timeless that the different successors to the Lionel Corp. have continued to produce them, and new versions appear frequently. Collectors and operators who suspend their disbelief often find they enjoy watching a giraffe bob, fish swim, or horses walk on their layout. Treat yourself to one (or all) of Lionel's wonderful animal cars and you, too, will agree that these classics are delights for the whole family. **CTT**



How much is that fishy in the window?

Postwar animal cars vary in the prices they command today. Most can be obtained relatively inexpensively; if you prefer, reissues are available for most of them. The prices listed are for original cars in excellent condition and come from *Greenberg's Pocket Price Guide to Lionel Trains, 1901-2000*.

3356	Horse Car and Corral	\$125
3366	Circus Car and Corral	\$240
3376	Bronx Zoo Car	
	(blue w/white)	\$50
	(green/yellow)	\$100
	(blue/yellow)	\$290
3386	Bronx Zoo Car	\$55
3434	Operating Poultry Dispatch Car	\$90
3435	Traveling Aquarium	
	(heat-stamped w/gold circle)	\$950
	(Tank no. 1/Tank no. 2)	\$770
	(gold heat-stamped)	\$305
	(yellow rubber-stamped)	\$225
3656	Cattle Car and Corral	
	(black lettering; Armour)	\$190
	(white lettering; Armour)	\$80
	(black lettering; no Armour)	\$70
	(white lettering; no Armour)	\$70
6356	New York Central stock car	\$36
6376	Circus Car	\$65
6434	Poultry Dispatch	\$65
6473	Horse Transport	\$24
6556	M-K-T stock car	\$215
6646	Lionel Lines orange stock car	\$38
6656	Lionel Lines yellow stock car	
	(Armour)	\$105
	(no Armour)	\$18



Stock cars were basic elements of the postwar line. The nos. 3656 and 6656 models (shown in the photo on pages 58-59) were superseded by larger cars. First came the no. 6356 yellow New York Central car. Lionel next brought out the no. 6376 white circus, followed by the desirable no. 6556 red M-K-T car.

The best 10 Lionel boxcars

A postwar expert selects the rarest members of the 6464 family

by Terral Klaassen | photos by William Zuback



I'VE BEEN COLLECTING boxcars in Lionel's desirable 6464 series since 1974. In that time, I've examined more than 20,000 cars and spent endless hours discussing and debating boxcars with knowledgeable collectors. Thanks to their cooperation, I've been able to identify and document more than 500 variations and list them according to importance and rarity. As additional variations are located, they're documented and my listing is updated.

My interest in 6464 boxcars explains why, when CLASSIC TOY TRAINS asked me to write about them, I wanted to put together an article that would inform novices and veterans alike, regardless of whether they owned 3 or 300 of these cars, and describe the thrill of chasing after elusive and rare variations. With these two goals in mind, I selected the top 10 boxcars from my list.

What makes a boxcar a candidate for this select company? First, it meets one or both of the criteria for being in a variation collection: One, the car is a production variation (boxcars may vary in rivet configurations, body mold colors, lettering, and so on, but must have

been intended by Lionel to be sold to consumers); two, the boxcar is illustrated in Lionel catalogs or promotional materials.

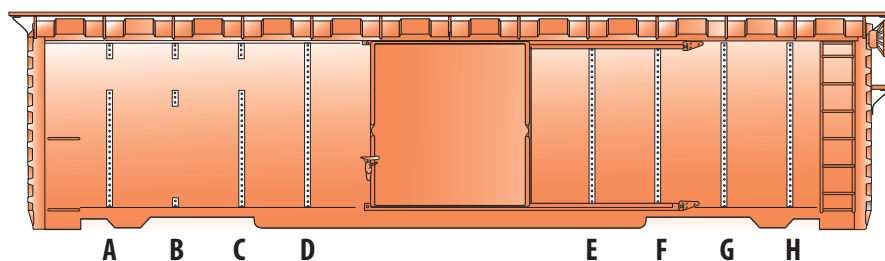
These criteria preclude the consideration of paint samples, prototypes, and odd mock-ups made by Lionel employees. Such cars are highly collectable items. However, because Lionel never tried to mass-produce them, I excluded them from this list.

For the same reason, I also left off factory errors and misprints, along with

chemically altered cars.

Second, the boxcar must be very rare. The 10 best list isn't a popularity contest; if it were, such well-known cars as the no. 6464-300 Rutland with a filled-in, or "solid," shield and the no. 6464-1 Western Pacific with red lettering would be included. No, all the cars described here are extraordinarily rare. To be precise, a dozen or fewer examples of each have been reported.

Those are the rules. Now, without further ado, let the countdown begin!



Collectors have identified four body molds used for 6464-series boxcars between 1953 and 1969. The four types differ according to their patterns of rivets. Eight columns exist on each side. They were left complete or broken to facilitate the stamping of various graphics. The Type I body is shown here.

10 6464-225 Southern Pacific Type I body mold, white plastic



The common variation of this car was manufactured using a Type IIa body mold, which has three complete columns of rivets on the right side. (The types of 6464 boxcar body molds specified here are illustrated in the accompanying drawing.) Very rare examples feature the earlier Type I body, which has an additional column of rivets that runs through the red-and-yellow herald and interferes with the printing of the word "overnight."

This is a recurring theme – where rare variations look odd because an earlier body mold ruins the appearance of their graphics. I consider the Southern Pacific with a Type I body a prize even when molded in its more common black plastic (number 11 on my list). When molded in white, however, it becomes scarcer and deserves to be ranked number 10.

9 6464-700 Santa Fe Type III body mold, blue plastic



This boxcar is the philosophical twin to the previous one, as it has a rare body type and was molded in a scarce color of plastic. The Type III body mold features three full columns of rivets on the left side; the Santa Fe typically used a Type IV body, which has two columns on the left side. A boxcar with a Type III body molded in its more common gray plastic is so rare that I rank it at number 12. A blue plastic car (wearing red paint) is scarcer and earns its position at number 9.

8

6464-250 Western Pacific Type III body mold, blue plastic

The common variation of this car has a type IV body. Rare examples use a Type III body; its extra column is tightly squeezed between the I and the F in the word "Pacific." If Lionel had intended to use a Type III, it would have left more space between the rivets and the lettering. Look at the rivet column on the far left and note the space between the S and T in the word "Western."

Equally interesting is the color of the body mold, which is blue rather than the common orange used with the Type IV body. You can identify the blue by examining areas where the packaging has rubbed off paint, checking ladders and roof edges for chips, or peering inside the car with a flashlight. This extremely rare Western Pacific is the best of all Type III boxcars, and it finishes in eighth place.



7

6464-100 Western Pacific Type I body mold, orange with blue feather

A very unusual car, this normally came on a Type Ila body mold, which has three columns of rivets on the right side. By using an earlier Type I body, Lionel inadvertently defaced the square Western Pacific herald (centered directly over the additional column) and deformed the second R in the word "underframe" so it looks like "underflame." This truly spectacular car comes in at number 7.



6

6464-50 Minneapolis & St. Louis Type Ila body mold

When, as with the four cars listed above, a variation uses an earlier type of body mold, the typical explanation is that an old, undecorated body somehow sneaked into a batch of shells and was painted. But why would a later type appear on certain boxcars? The best answer is that such cars have replacement shells made sometime after the original production run. It's also possible that these cars were manufactured at the time when Lionel introduced a new body mold. Either way, the result can be a supremely rare collectible.

This Minneapolis & St. Louis boxcar with a Type Ila body mold, like the next two cars, exemplifies this circumstance. Were any other cars intended to have a Type I body (the no. 6464-25 Great Northern, for example) also made with a Type Ila shell? It's unlikely, because none has been reported after all these years, but the possibility can't be ruled out.

The 6464-50 described here would be a highlight of any great collection. Beware of fakes, which are easily identified by their heavy and shiny black heat-stamped lettering. My original model rightly owns the spot as the sixth best boxcar.



5

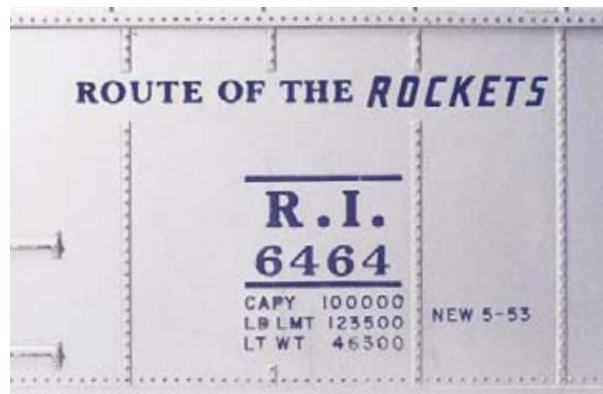
6464-1 Western Pacific Type Ila body mold, blue lettering



All three of the extremely rare cars with a Type Ila body mold have common versions that use a Type I. Of them, this 6464-1 best shows what the "wrong" body can do. Note the slogan "Rides like a Feather" on the right side of the car. Lionel put wide spaces between the words to compensate for the additional column of rivets on the Type I body. On the Type Ila shell, this unnecessary spacing looks odd, but it intensifies the allure of this magnificent car that is the fifth best boxcar.

4

6464-175 Rock Island Type Ila body mold



This silver boxcar is the best of the super-rare Type Ila variations. For many years I had heard about this car, but could never locate one or even confirm its existence. It was like looking for the proverbial Type Ila needle in a Type I haystack! Eventually, though, I acquired this fantastic boxcar that truly merits the number 4 position.

3

6464-150 Missouri Pacific Type I body mold



While the normal production of this car was on the Type IIa body mold, a car with a Type I body was shown in a promotional flyer that introduced four new 6464 box-

cars that Lionel included in its advance catalog for 1954. That car had the phrase "For Merchandise Loading Only Between M.P. Lines and T & P. Freight Stations Do Not Interchange With Other Lines" decaled on the upper part of its left side.

Regular-production cars, in contrast, feature that wording on the right side. This car was, therefore, most likely a preproduction sample pictured in the flyer. Extraordinary, to say the least, this Missouri Pacific boxcar holds the number 3 spot.

2

6464-1954 Western Pacific Type I body mold, orange with blue feather

Undoubtedly the most famous boxcar in my top 10, it probably was displayed at the American Toy Fair or used as a promotional item. Collectors have hunted for examples for more than 40 years and so far have turned up only five. Even back in the 1950s, this car carried a substantial premium. At that time, when the common no. 6464-100 Type IIa orange and blue variation sold for less than \$5, one of these rare beauties went to a collector for \$25!

The defining feature of this Western Pacific car is the printing of the date "1954" on the left side where "6464100" ordinarily appears. The flyer promoting new 6464 boxcars in the advance catalog for 1954 shows this car with "1953." The numeral "3" appears handwritten, which suggests that Lionel used one of these samples for the illustration.

And so the 6464-1954 is the runner-up on my 10 best list. It will take an absolutely astounding, incredible boxcar to beat it. I think you'll discover that the number 1 boxcar is exactly that.



Pictured on page 15 of the 1953 consumer catalog and part of O gauge freight outfit no. 2201WS, this car is notable for the green paint, gold lettering, and "BLT BY LIONEL" slogan not seen on the common Tuscan production variation. Seeing such a car in the catalog persuaded many collectors that it had to exist. The possibility that it had been discarded long ago didn't stop endless discussions and fruitless chases. One man liquidated a large boxcar collection because he was so frustrated by his and everyone else's failure to find the car.

Until . . . Saturday, October 15, 1983.

While attending the semi-annual train show put on by the Eastern Division of the Train Collectors Association, I witnessed a miracle. There, almost covered up on a table, lay the green 6464-50. The seller asserted that the car was unusual and worth more than its common cousin. I stood there with my knees shaking as I wrote the check that would forever change boxcar history.

I quickly carried it to the main hall. As pictures were snapped of my find, an announcement went out over the public address system: "All boxcar collectors should congregate in the Blue Hall to witness an important find." Those who did were absolutely spellbound. One collector had tears in his eyes from the relief and joy of knowing that the boxcar truly existed. I know of no other event in my life that better exemplifies what collecting is all about. **CTT**

The author thanks Jeff Lampert and Alan Stewart for their assistance in preparing this article. All models have been sold and are in the collection of Jeff Lampert.

1

6464-50 Minneapolis & St. Louis green paint, gold lettering



Load bearers

A guide to Lionel flatcars with bulldozers and earth scrapers

by Alan Stewart | photos by Jim Forbes

FLATCARS CARRIED many different loads in the Lionel line during the late 1950s and early '60s: Christmas trees, airplanes, missiles, and more. Two of the most attractive of these loads are models of construction equipment then manufactured by Allis-Chalmers, a firm in West Allis, Wis., near Milwaukee.

Lionel first cataloged them in 1959

as the nos. 6816 Flat Car with Bulldozer and 6817 Flat Car with Earth Scraper. These two freight cars were cataloged in train sets and for separate sale in 1959 and '60. Sets no. 1617S and no. 2541W contained a 6816 in 1959, while set no. 2531WS included a 6817. Uncataloged outfit no. X-812NA had one of each.

In 1960, both cars were components of set no. 1639WS, and a 6817 was

packed in uncataloged outfit no. 9652. Other uncataloged sets containing one or both of these cars may exist, but have yet to be documented. By 1961, just the 6817 was listed in the catalog and then as a separate-sale item only.

Lionel also sold the 'dozer and scraper individually (\$1.75 each in 1959 and \$1.95 in 1960), and these offerings, in their original separate-sale boxes, are



even more eagerly sought by collectors than the flatcars are.

Both models were supplied in either of two boxes, one for promotional use by Allis-Chalmers and the other for sale by Lionel. Allis-Chalmers boxes feature photos of actual equipment at work. Colored black and orange with gray photos, these boxes appear to have no links with Lionel. But in white lettering discretely placed in one diagonal black stripe are the magical words: "MADE BY THE LIONEL CORPORATION, N.Y., N.Y."

The design of the boxes for sale by Lionel dealers differed between the 'dozer and scraper and are described in the section on packaging. Here's the information you'll need to guide you in identifying and collecting these desirable models.

Earth scraper

Two major variations of the scraper exist: "wire-windshield" and plain. When first produced, the scraper had "Allis-Chalmers" heat-stamped in white on each sideframe of the scraper portion, while its tractor had that name along each side of the hood in raised letters highlighted in black.

Also present was a wire frame simulating a windshield for the driver and a radiator treatment featuring a ridge in the shape of an upside-down U, which might have been a protective bumper on the prototype. Each of the two photos of actual earth scrapers on the Allis-Chalmers packaging showed this same radiator treatment.

Two variations of the wire-windshield scraper have been documented. Usual examples have only a slender exhaust stack, unlike the prototype. But one example has surfaced with a second molded piece added to make the exhaust more realistic.

Because this added stack on the tractor was too big to fit through the hole in the hood, it had to be added after assembly and must have been troublesome in production. Judging from its rarity, this extra stack embellishment was quickly eliminated, leaving just the fragile stem to serve as the stack.

The other minor variation sometimes found is one with virgin holes for the windshield. This might be a production error, or it could indicate the second

LEFT: This uncataloged Lionel outfit from 1959 featured both the nos. 6816 and 6817 flatcars with loads of Allis-Chalmers heavy construction equipment. These two models were also available as separate-sale items that came packaged in unique and highly collectible boxes.



ABOVE: The scraper came in an Orange Perforated box on either a red (common) or black (rare) flatcar heat-stamped in white with "6817" and "LIONEL." Two elastic bands secured the scraper for transport.

RIGHT: So far, only one example of the 6817 has been found with a cardboard liner.



step (after elimination of the exhaust stack) toward making the scraper easier and less costly to produce.

Probably shortly after the promotional models for Allis-Chalmers were completed, Lionel further simplified production by making some major changes in the scraper model. The wire windshield, white heat-stamped lettering on the scraper, and black highlighting on the tractor were omitted.

Lionel also revised the mold for the "bumper" on the radiator and removed the holes for the wire windshield and the radiator bumper. And it deleted the raised "Allis-Chalmers" on the front, replacing it with a diamond enclosing the initials "A. C."

If you're buying a scraper, be sure all the parts are present, especially on the scraper portion. In addition to the rear wheels and axle, it has six molded plastic parts.

Also check for two simulated hydraulic cylinders on the underside of the mainframe, front yoke, rear bin and blade (called the "bowl"), front apron that contains the dirt for transit, and rear ejector used to force out dirt in leveling and unloading operations. The apron, ejector, and hydraulic cylinders are removable and are sometimes missing.

Be sure the pin connecting the tractor to the scraper is intact. To avoid breaking the pin, never couple the scraper and its tractor when moving or storing them, even in the original box. Repaired or replaced pins can often be detected by looking on the underside of the model.

Examine the exhaust stack with care.

Beware of restoration efforts that involve painting a wire to replicate this part. No part of either the scraper or the 'dozer was ever painted. Check for paint (be sure a later yellow version hasn't been painted orange). You want to be sure you purchase a scraper that's 100 percent original.

Bulldozer

Six authentic variations of the bulldozer have been identified (see table on page 62). With one notable exception, the changes were, as with the scraper, aimed at making the model less expensive to produce.

From the earliest example in the Allis-Chalmers packaging, we know that the first production was the typical unpainted dark orange molded plastic with heat-stamped decoration. The raised "Allis-Chalmers" on each side of the hood was highlighted in black, the seat back was stamped "Allis-Chalmers" in white, and each side of the seat had the "Torqueconverter" emblem in black.

First to go was the troublesome highlighting of the raised hood lettering. Models with this feature are scarce. Surprisingly, the next change involved more decoration! A new line – "HD 16 DIESEL" – was added above the emblem on each side of the seat. This probably didn't cost any more since the heat-stamp tape wouldn't be significantly wider. It did, however, involve the cost of a new heat-stamp die.

Why Lionel would incur this expense is a mystery. However, the earliest advance catalog descriptions refer to the HD 16 Diesel, even before “Allis-Chalmers” was added.

A mold change was the next revision, probably because one or more of the tiny pins used to form the indexing holes in the trailer hitch broke. Early production models have a hitch with two simulated positions to each side of center as well as a hole where an implement could be attached to the hitch “tongue” (style 1 in the table).

However, no example has been observed where all these holes are cleanly molded. My guess is that this detail of the mold proved troublesome, perhaps leading to slow mold cycle times or a high scrap rate. Therefore, the mold was reworked, resulting in the shorter, less-detailed hitch of later models (style 2 in the table).

Next, the rear lettering on the seat went from white to black. Instead of two colors to print, the whole seat could be printed in one, possibly on two stations of the same machine, which would significantly reduce costs.

Finally, a production run of the

’dozer was done with a different batch of plastic that was a lighter orange (much like that used for the telltales of the no. 3424 brakeman car and the frame of the 6519 Allis-Chalmers car).

’Dozers in this lighter orange are quite desirable, and some collectors associate them with the black 6816 flatcar variation, but light orange versions have been reliably reported with red flatcars and dark orange versions have been reported with black cars.

If you’re buying a dozer, be sure all parts are present and no mixing and matching has been done to create variations not listed here. Examine the air-cleaner stack (near the driver), the exhaust stack (front), and the two simulated hydraulic cylinders that control the blade. These parts are easily broken.

Each of these pieces was produced in a mold with two halves, so a slight parting line along the sides should be apparent. Look on each hydraulic cylinder for two round marks where the ejector pins pushed the part from the mold. If either of these cylinders is perfectly round with no evidence of having been molded, it has been repaired or replaced. Last, be aware of ’dozers with

silk-screened markings or no markings at all; these are probably yellow reissues painted to simulate original models.

Flatcars

Lionel used two different flatcar molds. One produced 6511-2 bodies, and the other made 6424-11 bodies (these numbers were molded into the bottom of the car). Over time, Lionel altered these molds to accommodate different loads or even create new cars.

Both the 6816 and 6817 flatcars were produced in red and black plastic, with black being the rarer for both cataloged pieces and reported only with a 6424-11 body. Neither car was painted, and the only decoration is white heat-stamped “LIONEL” lettering and the car number always on the left. As for trucks, only plastic AAR types were used, and they are always riveted directly to the body.

When considering the purchase of a red 6816 or 6817, remember that the load is of primary importance. If the flatcar is less than perfect, you can always obtain a replacement without much effort.

Black flatcars are something else altogether. Check for broken steps or a broken or cracked brakewheel stand. Ask the seller to press gently on the center of the car so you can look for cracked sideframes.

Be careful that you don’t get one of the black flatcars that originally came with only “LIONEL” heat-stamped on it but has had a number fraudulently added to it. On a correct car, the top of the number aligns perfectly with “LIONEL”; also, the numerals are truly horizontal and not angled in any way.

Packaging

Both the separate-sale Allis-Chalmers and Lionel boxes are identical in size. On Allis-Chalmers boxes, as the accompanying photos show, the third black stripe from the end contains the key words in white, “MADE BY THE LIONEL CORPORATION, N.Y., N.Y.” There is otherwise no way to link these boxes with Lionel. The contents are identified as “Allis-Chalmers Motor Scraper” and “Allis-Chalmers Tractor,” and there is no interior packaging, not even a paper wrap.

However, the scrapers did contain a printed “instruction” sheet with Lionel’s number 6817-130, dated 11/59. Rather than real instructions, this sheet (printed in red ink on buff

Lionel’s Allis-Chalmers Bulldozers

Variation	Hitch	HD16	Seat’s Rear Lettering	Color of Plastic	Hood Lettering
1	Style 1	No	White	Dark Orange	Yes
2	Style 1	No	White	Dark Orange	No
3	Style 1	Yes	White	Dark Orange	No
4	Style 2	Yes	White	Dark Orange	No
5	Style 2	Yes	Black	Dark Orange	No
6	Style 2	Yes	Black	Light Orange	No



When available as a separate-sale load, the ’dozer came in an Allis-Chalmers box (right) or a typical Lionel Orange Picture box for 1959-60 (left).

RIGHT: Lionel packaged the no. 6816 Flat Car with Bulldozer in its Orange Perforated box with a small cardboard liner protecting the model. Again, a red flatcar is far more common than a black one.

paper) contains a promotional paragraph plus illustrations of the loading, transit, and unloading positions of the earth scraper.

When offered as a separate-sale load by Lionel, the scraper was packaged in a plain white box with black lettering identifying it as an "Earth Scraper" made by Lionel. It came without any interior packing but some examples have included the same 6817-130 sheet as included in the Allis-Chalmers promotional models.

The 'dozer came in an Orange Picture box that's labeled "Bulldozer." Why it has a fancier box than the scraper is a mystery. Neither the Allis-Chalmers nor the Lionel packaging included any type of descriptive or instructional sheet.

All separate-sale boxes have a Lionel part number as well as the logo of Berles Carton Co., Inc., a firm in Paterson, N.J., that printed the boxes. For the scraper, number 6817-126 appears on one tuck-in end flap of the Allis-Chalmers box; number 6817-121 is found on the Lionel box.

Bulldozers have part number 6816-131 on the Allis-Chalmers box and 6816-121 on the Lionel. If the Allis-Chalmers promotional was produced first (as appears to be the case from the complexity of the models), why were the Lionel boxes given lower part numbers?

The 6817 Flat Car with Earth Scraper has been found with a unique interior cardboard liner, although so seldom that this was evidently abandoned shortly after the start of production. Of interest is the *Lionel Service Manual* parts list for 6817, which does not show a 6418-9 elastic band. Most examples have at least one, and the *Lionel Service Manual* does list one for the 'dozer.

Surprisingly, two boxes exist for the 6817, and both are Orange Perforated types with a perforated side panel that a dealer could remove to display the contents. The first and by far more common one, printed by Berles, is numbered 6817-20 (located on one tuck-in end flap). The second is part number 6817-22 and has no printer identification. Since putting the flatcar and scraper into the first box is difficult, Lionel likely saw the need for a slightly wider one and ordered the second type, which is otherwise identical with the first.



Only one box (part number 6816-20 on one tuck-in flap) and printed by Berles has been reported for the Flat Car with Bulldozer. It's also an Orange Perforated type, which is flimsy and often lacks its punch-out panel.

Interior packaging for the 6816 consists of a stamped piece of cardboard with one 6418-9 elastic band. The liner protected the stacks and probably was standard issue.

Fragile yet beautiful

When found in perfect condition, the detailed models of Allis-Chalmers' bulldozer and earth scraper make realistic and appealing flatcar loads. However, operators or collectors intent on acquiring these models, especially with their separate-sale packaging, discover that their fragility and relative scarcity make this task difficult.

ABOVE: When the scraper was offered for separate sale, it came in either an attractive Allis-Chalmers box (left) or a plain Lionel box (right).

All the same, the descriptions given here of these loads and their packaging should put you in a position to recognize the rarest examples and avoid fakes in this most interesting niche of Lionel collecting. **CTT**

Alan Stewart has been contributing to CTT for more than a decade. He is the author of the revised edition of Greenberg's Guide to Lionel Trains, 1945-1969, vol. 6: Accessories. Alan extends special thanks for their generous contributions to this article to Robert Corbin, Donald Corrigan, Newton Derby, Norman Fuhrmann, Terral Klaassen, Max Knoecklein, Fred Merriman, Larry Nahigian, Buz Ray, Don Speidel, and Mark Stephens.

BRALLEN
ADLEY
CO.



Making the right connection

by John A. Grams

EVEN IN THE best-organized collection or on a well-regulated layout, steam locomotives and tenders often become mixed up. Then comes the struggle to correctly pair them again. Sometimes confusion arises when you buy a great tender at a bargain price because it doesn't have a running mate. You're left searching for a suitable companion for that terrific find.

Fortunately, this article can provide answers. It's a follow-up to the series I did for *CLASSIC TOY TRAINS* on the history of some Lionel steam locomotives. Those articles include "Lionel's Mighty Turbines" (January 1998), "The 226E Dynasty" (July 1998), "Lionel's 225 through 675 Steamers" (January 1999), and "Lionel's 224 Family Tree" (February 2000).

Instead of showing you which locomotives can haul a given tender, I'll take the opposite approach and start with the tender. By looking through the listings for the various tender types and numbers, you should be able to determine when your tender was made and which engines were sold with it.

Lionel used eight basic tender types during the postwar era. Four of them were carryovers from the prewar era. But, as with the locomotive types that reappeared after the war, there were noticeable modifications in the tooling, details, and materials used.

For the sake of consistency, I'll use the same classification categories as found in the seventh volume of *Greenberg's Guide to Lionel Trains, 1945-1969*. This excellent source provides more detail about tenders and should be consulted by those wishing to learn more.

Many postwar Lionel locomotives had different tenders behind them at different times, so the tender catalog number becomes

essential. It was usually rubber-stamped on the bottom of the tender. In a few cases, the number appears on the sides.

If the number can't be found or is no longer legible, check the body length and other identifying traits given for each of the tender types. Because some types were made for years, the information in the sidebar on truck and coupler changes can help in finding the approximate year of manufacture.

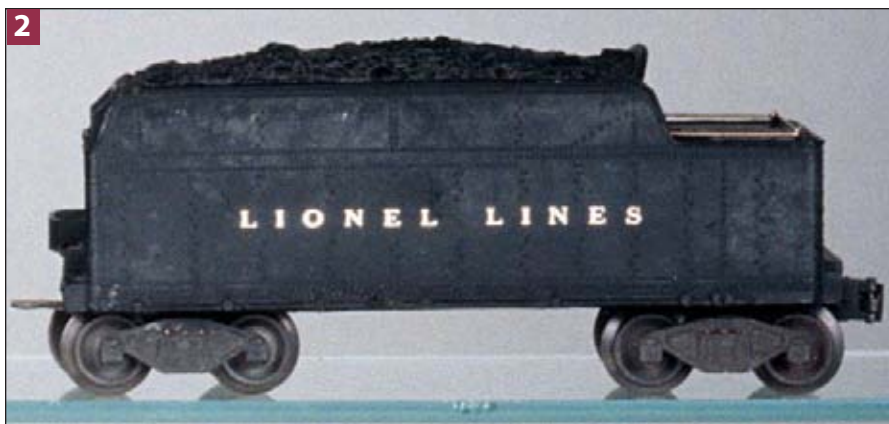
However, not all postwar tenders had numbers on them. In the last dozen or so years of Lionel's postwar line (roughly 1957 to 1969), tenders were not routinely numbered anywhere. Even the annual catalogs didn't usually list tender numbers for a good reason – there was a lot of substitution to facilitate inventory control, particularly in the low-end outfits.

Much of Lionel's business in those days was with mail-order and discount chains that wanted complete sets they could market competitively. These uncataloged promotional sets were assembled with hastily produced components (often undecorated and unlettered) and surplus inventory. Having too many numbers got in the way.

That's why trying to sort out which tender went with which locomotive at a particular time can become almost impossible, especially when dealing with the second half of the postwar era. Primary sources of information no longer exist, if they ever did. We're left with input from set-owning collectors.

Therefore, in the accompanying tables listing specific tender numbers over time, I can offer only educated guesses about some of the little-documented locomotive and tender pairings. If there was a question about the tender, I listed it anyway.

Put the correct tender behind your postwar steamer



Semiscale

1 These deluxe models of a New York Central prototype were based upon a prewar design introduced in 1938 as the no. 2226W. A highly detailed black die-cast metal body shell (8 $\frac{1}{2}$ inches long and lettered for "Lionel Lines"), with a plastic coal pile, rode on a sheet-metal frame. The tenders were equipped with six-wheel trucks of formed sheet metal with plastic side-frames and coil couplers.

Early Coal

2 Based on the same New York Central prototype, this is a smaller version of

the semiscale 2426W. It also came from the prewar line, introduced in 1941 as no. 2666T/W.

The two-piece construction features a black plastic shell (7 $\frac{1}{2}$ inches long and lettered in silver or white for "Lionel Lines" in different typefaces) over a sheet-steel frame. The tenders were equipped with four-wheel trucks of the bar-end, staple-end and Scout types, with coil or magnetic couplers.

The reason for the "X" designation on some tenders is unclear or at least debatable. Some sources maintain, quite logically, that it was used to indicate the presence of a wire railing detail on the tender deck.

All the same, empirical evidence

contradicts this – the bulk of it shows that the "X" was either inconsistently applied or a great many tender shells have subsequently been switched. (Prewar practice included the deck rail without an "X" after the number.) None of these tenders had deck rails after 1950.

Tenders used with steam turbines (nos. 671W, 2020W, 4424W, and 4671W) sported four corner hand railings in addition to the deck rail. (None was given an "X" for the deck rail, so that theory breaks down even more.)

Sheet-Metal

3 Commonly known as "coffin tenders" for reasons that are obvious from their appearance, these 6-inch-long streamlined models were based on a prewar design introduced in 1936 as the no. 1689W. They were constructed from two sheet-steel formations and held together with tabs and slots. The sheet-metal tenders were equipped with four-wheel trucks of the staple-end or Scout types, with coil, magnetic, or Scout couplers.

The 1946 models of the 221T and 221W were painted gray; the rest were black. The 221T and 221W were lettered for "New York Central," the 1001T for "Lionel Scout," the rest for "Lionel Lines." All but the 1001T had whistle vents in their roofs.

Slope-Back

4 Made throughout the entire postwar era, these 5 $\frac{1}{2}$ -inch-long tenders were carryovers from the prewar design for the no. 2201, circa 1940. The prototype came from the switch engine roster of the Pennsylvania Railroad.

Models from 1946-49 had die-cast metal bodies and sheet-metal frames and were equipped with built-in ringing bells and working backup lights. The later plastic-shelled models had less detail and were apparently so inexpensive to produce that they appeared in many bottom-of-the-line sets.

The tenders were equipped with four-wheel trucks of the staple-end, AAR, and arch-bar types, with coil, magnetic, disc, and dummy couplers. These black tenders were lettered for "Lionel Lines" or had no decoration.

Streamlined

5 Also patterned after a Pennsy prototype, Lionel's 8 $\frac{1}{2}$ -inch-long streamlined tenders featured a plastic shell over a sheet-metal frame, with a plastic



water scoop hanging underneath. The first version (no. 2671) had six-wheel trucks with coil couplers; others had four-wheel staple-end, bar-end, or AAR trucks, with magnetic or disc couplers.

The lettering on these black tenders varied: "Lionel Lines" (2046W, 2671WX), "New York Central" (773W), "Norfolk and Western" in a maroon side stripe (746W), and "Pennsylvania" (736W, 2046WX or 2046-50, 2671W).

Small Streamlined

6 A scaled-down version of the Lionel Pennsylvania streamlined tender used with smaller locomotives. All were black except the pink no. 1130T-500

(component of the no. 1587S Lady Lionel). They featured a plastic shell over a sheet-metal frame, lacked a whistle, and were equipped with four-wheel trucks that went along with manufacturing changes over the years – staple-end, AAR, and arch-bar – with magnetic, disc, and dummy couplers.

The tenders were lettered for "Lionel Lines," with these exceptions: "Baltimore and Ohio" in a blue side stripe (247T), "Pennsylvania" in a red stripe (250T), "Southern Pacific" (some 1060Ts cataloged between 1963 and 1966).

Square

7 Made to represent the appearance of a typical hard-working freight

No.	Cataloged	Loco.
Semiscale Tenders		
2426W	1946-49	726
	1950	773
Early Coal Tenders		
671W	1946-47	671
2020W	1946-47	2020
2466T	1946	224, 1666
2466W	1945	224
	1946	224, 1666
2466WX	1946	224, 1666
	1947	675, 1666, 2025
	1948	675
4424W	1946	671R
4671W	1947-49	671R
6001T	1950	6110
6020W	1948-49	2020
6066T	1952	2026, 2034, 2037
	1953	1130, 2026, 2037
6466T	1951-52	2026
6466W	1950	2035, 2036
	1951	2026, 2035
	1952	2025, 2026
6466WX	1948-49	675, 2025, 2026
Sheet-Metal Tenders		
221T	1946-47	221
221W	1946	221
	1947	221, 1654 (uncat)
1001T	1948	1001, 1101
	1949	1110
	1950	1120
	1951-52	1110
1654T	1946-47	1654
1654W	1946-47	1654
6654W	1948-49	1655
Slope Back Tenders		
244T	1960-61	244, 246
1050T	1959	1050
	1960	1060
	1961	235, 236, 1060
1061T	1963-64	237, 242, 1061, 1062
	1965-66	237, 242
	1969	1061
1062T	1963-64	237, 242, 1061, 1062
	1965	237, 242
	1966	237, 242, 251
	1969	1061
1615T	1955-57	1615
1625T	1958	1625
2403B	1946	1665
	1948	1656
6403B	1948-49	1656
Streamlined Tenders		
736W	1960-61	637
	1962-63	637, 736
	1964-65	736, 773
	1966	665, 736
	1967-68	736
746W	1957-60	746
773W	1964-66	773
2046T	1951	Export
2046W	1950-51	2046

7



8



An easy way to date postwar tenders

A QUICK WAY to date tenders and rolling stock is through the types of trucks and couplers that Lionel used. While this isn't a foolproof method—the trucks on some tenders could have been changed—it is a place to start and works most of the time. Don't forget that there was some overlap in Lionel production, so several types can show up in the same timeframe.

Staple-end trucks (metal)

Coil couplers (1945-48)

Magnetic couplers (1948-51)

Bar-end trucks (metal)

Magnetic couplers (1951-61, 1969)

Scout trucks (sheet-metal, plastic sideframes)

Scout couplers (1948-51)

Magnetic couplers (1950-53)

AAR trucks (plastic)

Disc couplers (1957-69)

Arch-bar trucks (plastic)

Dummy couplers (1959-69)

Six-wheel trucks (sheet-metal, plastic sideframes)

Coil couplers (1946-51)

train tender, this 7 $\frac{3}{4}$ -inch-long model sported a nicely detailed black plastic body on a sheet-metal frame. They were equipped with four-wheel trucks that went along with the manufacturing changes over time and featured bar-end, AAR, and arch-bar trucks, with magnetic, disc, and dummy couplers. The tenders were lettered for "Lionel Lines," except for "Pennsylvania" on some 234s made in 1966.

locomotives. They featured plastic shells and woodpiles on sheet metal-frames and were equipped with four-wheel arch-bar trucks with dummy couplers. All were lettered for the Western & Atlantic Railroad ("W&A RR"), but colors varied: green with tan woodpile (1862T and 1872T) and black and orange with tan woodpile (1882T). **CTT**

General

8 These little tenders were outfitted to go behind the Civil War-era General

No.	Cataloged	Loco.
	1952	675, 726RR, 2056
	1953	736, 2046, 2055
	1954-55	646, 736, 2055, 2065
	1956-58	646, 665, 736
	1959	637, 665, 736
	1960	736
2046WX	1952	671RR
	1953	681
	1954-55	682
2671T	1951	Export
2671W	1948-49	671
	1950-51	681
2671WX	1950-51	736
Small Streamlined Tenders		
242T	1963	1062
	1964	240, 1061, 1062
	1965	237, 242, 1062
	1966	237, 242, 1061, 1062
247T	1959	247
250T	1957	250
	1958	249
1060T	1960-61	1060
	1962	242, 1060
	1963	237, 242, 1061, 1062
	1964	242, 1061, 1062, 2029
	1965	1061, 2029
1130T	1954	1130
	1957	2018, 2037
	1958	248, 2018
	1959	245, 246, 2018
	1960	244, 246
	1961	235, 236, 244, 246
1130T-500	1957-8	2037-500
Square Tenders		
233W	1961-62	233, 2037
234T	1968-69	2029
234W	1963	238, 2037
	1964	238, 2029
	1965-66	237, 239, 241, 2029
	1967	237, 239, 2029
	1968-69	2029
243W	1960	243, 2037
	1961	2037
6026T	1954-55	2037
	1956	2018
6026W	1953	685, 2055
	1954	665, 2055, 2065
	1955	665, 2016, 2055, 2065
	1956	2016, 2018, 2065
	1957-59	2037
General Tenders		
1862T	1959-62	1862
1872T	1959-62	1872
1882T	1960	1882