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Model Railroad Hobbyist | November 2017 | #93

MRH Q-A-T

column

compiled by
JOE BRUGGER



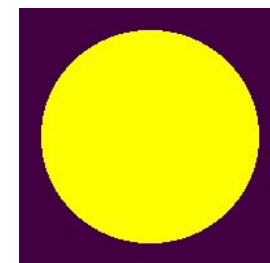
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? QUESTIONS AND ANSWERS

Wheel dots, consolidated stencils, and ACI labels

Q. I'm trying to do a better job of modeling freight cars in the late 1970s era and am getting confused trying to get COTS stencils, ACI labels, and wheel dots in the right places. Can you help?

—Robby S.



A. COTS panels appeared as small black boxes on the side of freight cars in 1966. The idea was to pull maintenance data into a single place. COTS is an acronym for "Clean, Oil, Test, Stencil."

From 1972 to 1974, they appeared as a black box with a white border.

From 1974 to 1982, there were two bordered boxes, either stacked or side by side.

1. Wheel dots were part of the U-1 inspection and replacement program that began in March 1978.

► **MRH QUESTIONS, ANSWERS, AND TIPS**



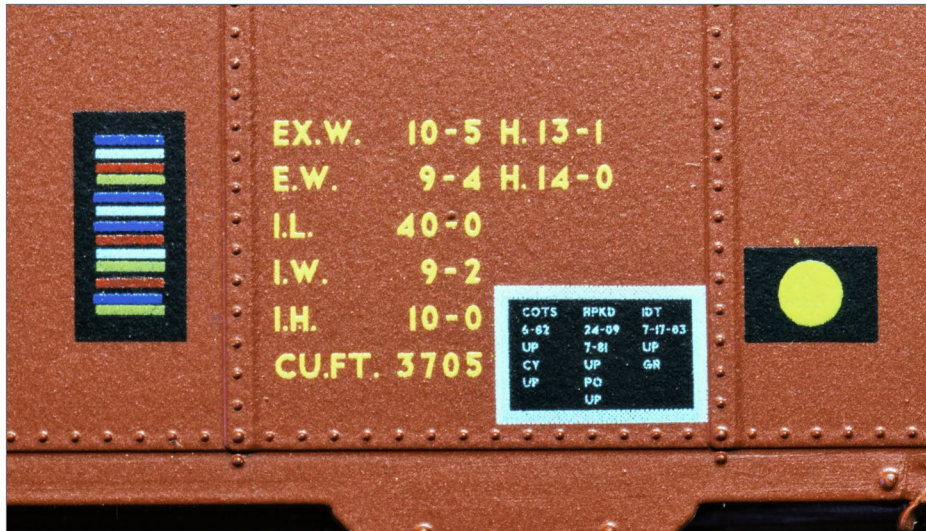
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In 1982, a three-box design became standard and is still in use today. In all cases, the stencils go on the lower right-hand side of the car.

Wheel dots were in use from March 31, 1978 as part of the intensive U-1 inspection campaign to identify and replace a series of 33" wheels, manufactured by the Southern Wheel Company, suspected of failing in service and causing several serious derailments.

The dots (a 6" dot on a 12" black square) are placed on the lower right-hand area of the car side. A white dot indicates a wheelset in need of replacement and banned from trains carrying hazardous materials. A yellow dot indicates a safe wheelset.

Beginning December 31, 1978, the white-dot wheels had to be removed and replaced with wheels of an approved type. New cars built in 1978 between the end of March and the end of December



2. All three elements line up on a Union Pacific B-50-24 boxcar used in maintenance of way service as a tool/material car in the early 1980s. 32nd Ave. Shops photo

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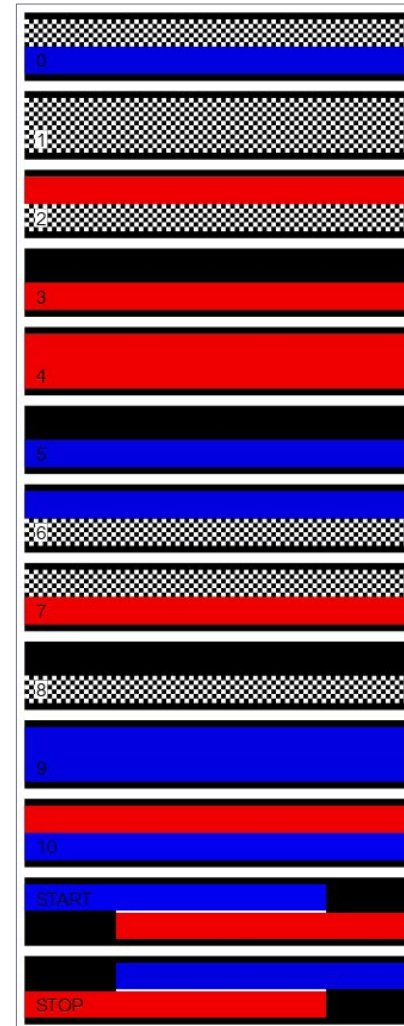
had yellow dots applied at the factory. There was no date given for removal of these markings so they remained on cars for several years.

ACI labels were in active use from 1967 to 1977. They are part of a car identification system developed by General Telephone and Electronics, using color bar codes that could be deciphered by a reader placed along the tracks. By 1975 90% of all railcars were labeled.

Even in the early years of the program there were problems reading the panels after dirt and grime accumulated in service. After several years, a test made under ideal conditions still showed a 10% mis-read rate, and the industry pulled the plug on the program.

Those are the simple answers. Here are some modeler-friendly details:

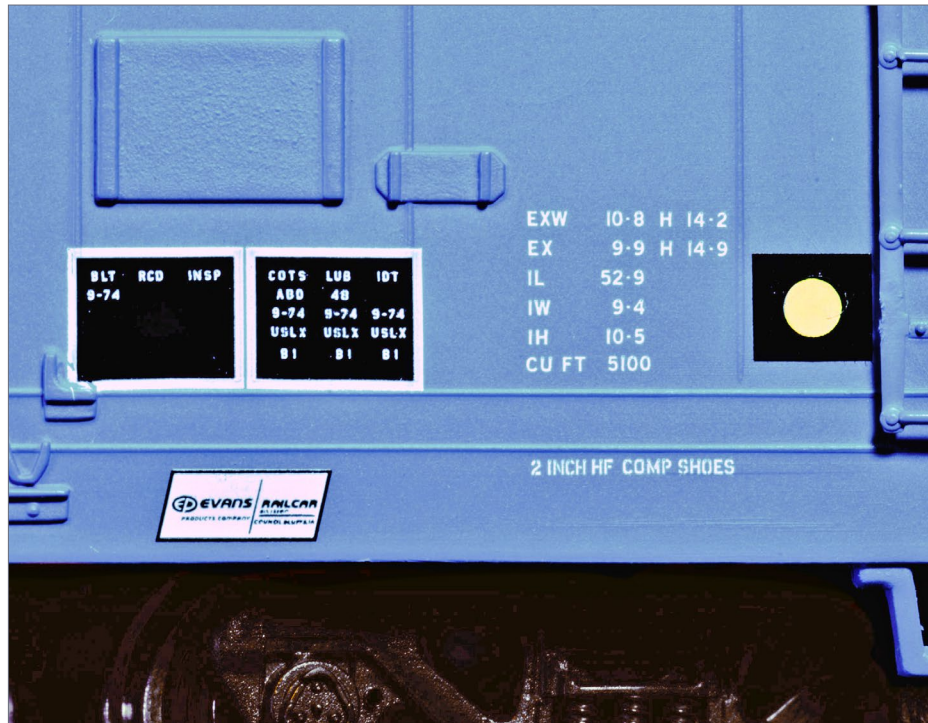
ACI labels were positioned high enough to be visible to track-side scanners and were placed so they could not be obscured by an open door. The preferred location was above the inner axle of



3. KarTrak ACI labels were part of an ultimately unsuccessful 1960s program to track freight cars automatically.

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the right-hand truck approximately seven feet above the rail. The highest permitted location was 9'-6" above the rail and the lowest permitted location was 1'-4" above the rail. The allowed placement runs from just at the back of the outer axle of the right-hand truck to 5' from the inner axle of the left-hand truck. All other areas of the car are "forbidden." (This dimension was originally 4'-8" from the left truck. Sometime between 1968 and 1972 the minimum distance from the left truck changed).



4. A USLX boxcar built by Evans in September 1974 shows the wheel dot and updated COTS format, but not an ACI plate. 'ABD' is the brake type, 'LUB' or 'RPKD' the most recent bearing service date. 'IDT' is for in-date testing and shows the location and company performing the test. 32nd Ave. Shops photo

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Unless specific dates are given, these three programs were phased in. It took several years to get the ACI labels on all cars in interchange service, and labels could be seen on cars for many years after the ACI program ended.

There was considerable overlap of the different styles of COTS. For example, even after the two- and three-box versions were introduced, shops would continue to stencil updated information into the existing boxes rather than replacing them. Learn more at hosam.com/mod/rsdet.html#cots.

It was not unheard of to see yellow dots on cars with 36" wheels, and the dots persisted on cars long after the suspect wheelsets had been rounded up and replaced. On the other hand, you will probably not see a wheel dot on a car built in 1980 or later. You will probably not see an ACI label on a car built in 1978 or later.

1930s sawmill production

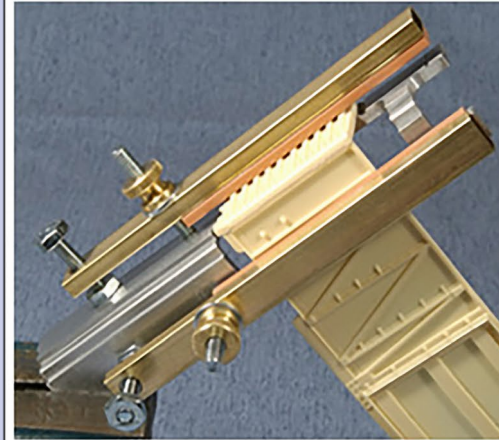
Q. Before WWII, my father worked as a timber cruiser in a lumber operation where South Carolina, North Carolina, and Georgia come together. He said they shipped a million board feet of lumber by rail, presumably from a mill in West Union, SC. A million feet a year? A million feet a month? Dad isn't around to ask. Assuming 36- and 40-foot boxcars, flats and gondolas, how many pre-war cars would it take to ship a million board feet of lumber?

—Marshall Keys

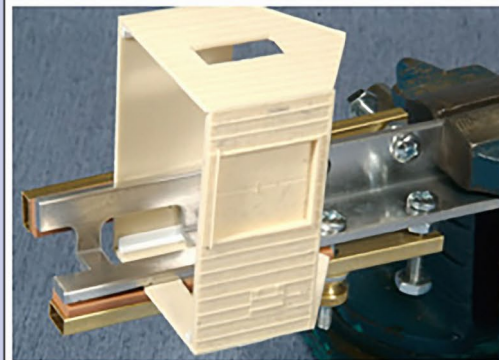
A. Dave Husman: A board foot is a board one inch thick and one foot square.

- 12 board feet = 1 cubic foot
- 1,000,000 bd. ft. = 83,333 cu. ft.
- A 40-foot boxcar is nominally 3500 cu. ft.

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