



DATA SHEET

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GENERAL

The information lettered on the sides and ends of a freight car, is a concise complete history of the car. It tells who owns it, how old it is, how much work it can do, what clearance limits it will fit, what special equipment it has, and the state of its routine maintenance. For the benefit of shippers, railroad operating personnel, and others who must refer regularly to freight car lettering, the Association of American Railroads has established standards as to the style, size and placing of all essential lettering. For example, the standards call for the reporting marks -- the car number and the abbreviation or name of the owning road -- to be as nearly as possible centered over the truck at the observer's left.

Sheet #:	D5e
Title:	FREIGHT CAR LETTERING
Updated by:	Ronald B. Tuff
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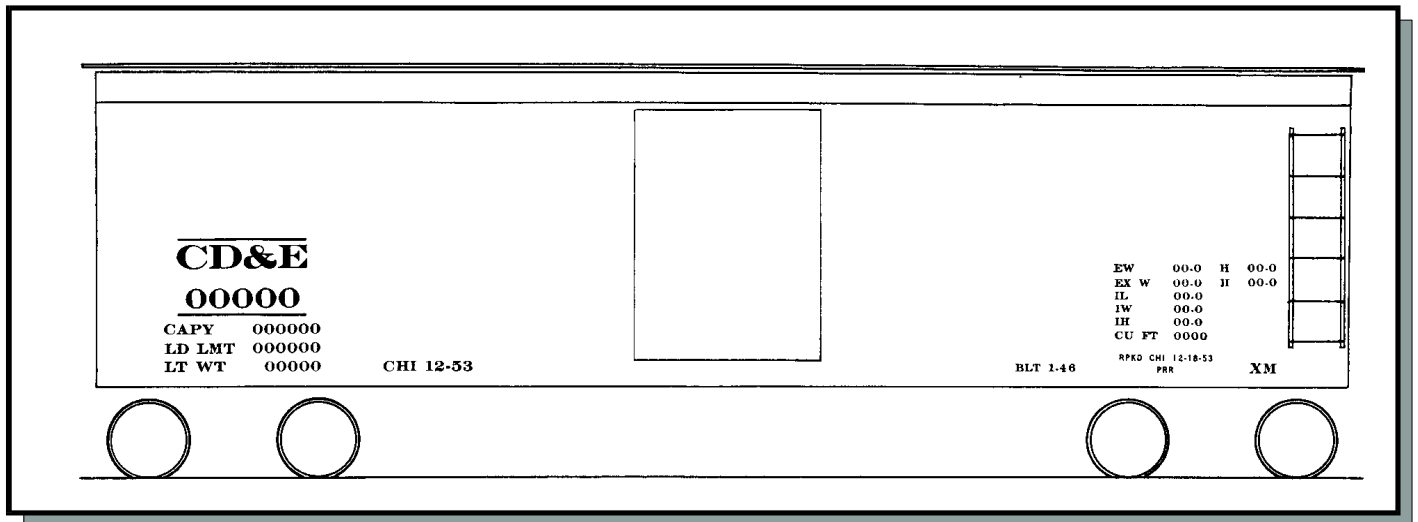


Figure 1: BOX CAR - SIDE VIEW

On most types of cars, as shown in the drawings, the reporting marks are enclosed above and below with inch-wide horizontal lines. Some roads omit them, of course, as a matter of preference. On Southern Railway gondolas and hoppers you'll find the word SOUTHERN in large capital letters centered on the car side, about a quarter of the way down from the top, with the number in large figures below it. Other departures from standard are a matter of need, such as on some New York Central, Pennsylvania and Seaboard automobile box cars. These have double doors with large door openings offset to the observer's left in the side of the car. Opened, the left-hand door would obscure the reporting marks if they were placed according to standard. The loads, therefore, have placed the reporting marks at the extreme *right* end of the car side. All information normally shown on the left side is placed at the right, and vice versa.

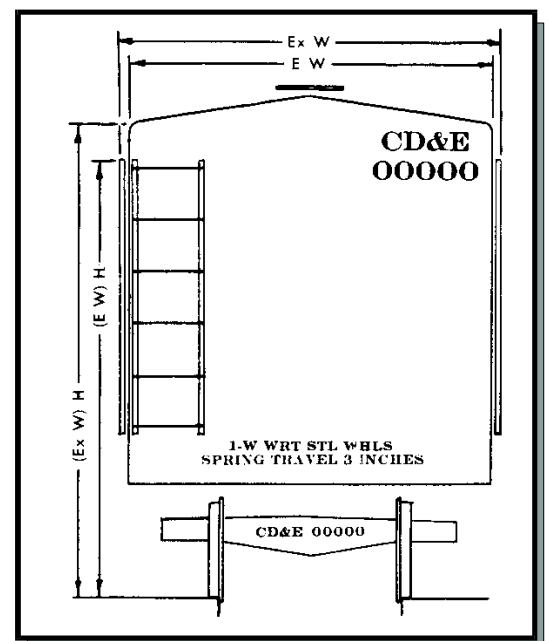


Figure 2: BOX CAR - END VIEW



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Standard lettering for most of the information is a squarish Roman, similar to the lettering used for the "CD&E" reporting marks in the drawings. There are many departures from this standard, of course; some roads favor plain block lettering, adopted this as their standard. The Great Northern, Union Pacific, C&EI, New York and major Canadian loads have adopted this as their standard. The Great Northern, Union Pacific, C&EI, New York Central, Southern and MK&T are among roads using other styles of lettering.

Nine-inch letters are preferred for car-side initials on box cars, hoppers and gondolas with numbers seven inches high in all cases. Seven-inch initials are preferred on flat cars and tank cars. Reporting marks appear on the ends of box cars, hoppers and gondolas in four-inch letters. The end views of the gondola and hopper are omitted, but the box car end view may be followed for position of lettering. Three-inch lettering is used on the truck bolsters of all car types, positioned as indicated.

On the three high cars, the lower edge of the letters in the road abbreviation should be placed 4 1/2 inches above the lower edge of the car side. 8 1/2 inches should separate this line from the car number below. Three inches should separate the lower defining line from the top of the "CAPY" line.

Capacity, load limit and light weight figures are shown in three-inch lettering, spaced three inches apart, centered below the reporting marks. The lowermost line is placed five inches above the lower edge of the car side. Following the light weight is shown the station and date of last weighing -- in the accompanying drawings, the notation "CHI 12-53" indicates that the cars were light weighted at Chicago in December, 1953. If the notation, "NEW 12-53" or its equivalent were used, it would indicate that the light weight of the car was last checked when it was built, in December, 1953. Any change in the light weight of the car brings about a change in its load limit because the sum of the load limit and light weight are related to the size of the journals on the car.

Refrigerator equipment -- floor racks, overhead bunkers, fans, meat rails etc. -- may be noted in one-inch lettering to the left of the weight information. Some owners use the car ends for this purpose, while others show this data to one side of the door or the other. The AAR recommends that other special information, as to wheel type, spring travel, draft gear or underframe specialties, be shown on the end of the car in the indicated position.

Two-inch Roman lettering, spaced two inches apart with the lowest line 16 inches from the lower edge of high car sides, is used to show the important interior and exterior dimensions of the car. The eaves width and height are shown on all roofed cars, and on those over twelve feet high, the extreme width and the maximum height of that width are shown. As indicated in the drawings, this information is omitted on other types of cars.

The date of construction or rebuilding is given in two-inch letters, five inches from the lower edge of most car sides. On the same line is shown the AAR classification, if used, in three-inch Roman letters. Maintenance data is given in 1 1/2 inch Gothic or block lettering. On the car side the legend, "RPKD CHI 12-18-53" PRR (Fig. 3) indicates that the journals were last repacked by the Pennsylvania in Chicago on the date shown. Similar information is stenciled on each air reservoir to show where, when and by whom the air brakes received their last important overhaul and



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CD&E 00000	CAPY 000000	LD LMT 000000	LT WT 00000	CHI 12-53	L 00-0 RPKD CHI 12-18-53 PRR	FM BLT 1-46
CD&E 00000	CAPY LD LMT LT WT	000000 000000 00000	CHI 12-53	L 00-0 RPKD CHI 12-18-53 PRR	FM BLT 1-46	

Figure 3: FLAT CARS

CD&E 00000	CAPY 000000 LD LMT 000000 LT WT 00000	CHI 12-53	BLT 1-46	IL 00-0 CU FT 0000	RPKD CHI 12-18-53 PRR	GK
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Figure 4: GONDOLA CARS

CD&E 00000	CAPY 000000 LD LMT 000000 LT WT 00000	CHI 12-53	BLT 1-46	CU FT 0000	RPKD CHI 12-18-53 PRR	HT
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Figure 4: GONDOLA CARS



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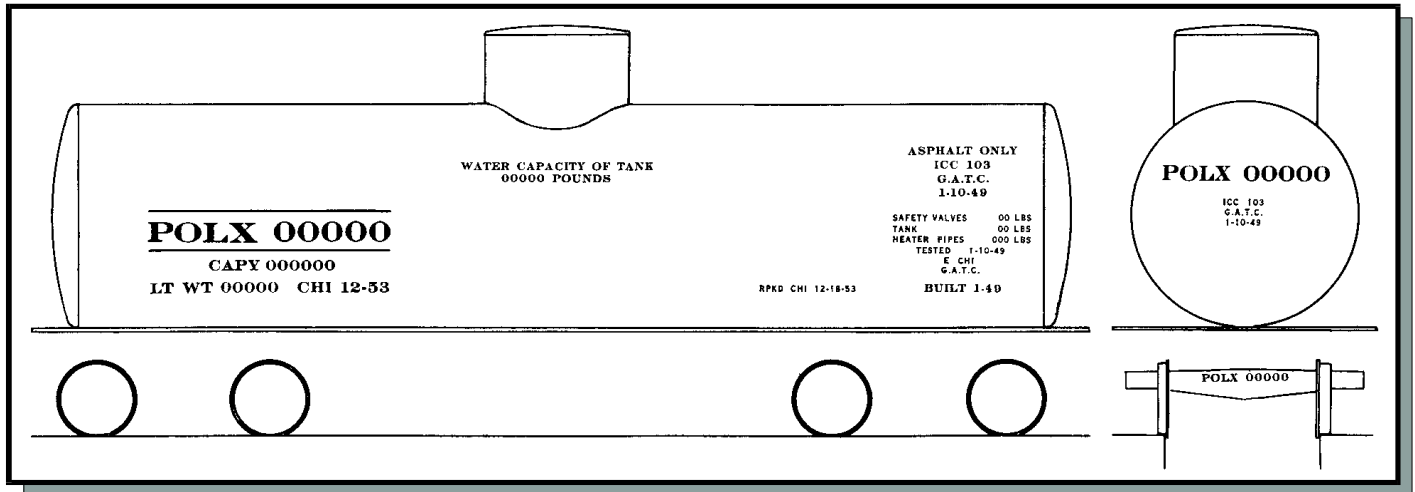


Figure 5: TANK CARS

checkup.

On the tank car, note the use of this same lettering to give safety test data as regards the tank and its appurtenances, as well as the car class, builder and date on the car end. Other information is shown in two-inch and three-inch Roman as on other types of cars.

CONSOLIDATED STENCILS

What is that black rectangle painted on the side of freight rolling stock? Consolidated stencils, or decals in some cases, contain the maintenance information for the car. First conceived by the American Association of Railroads (AAR) in 1974, the rules are clearly defined in their "Field Manual of the AAR Interchange Rules", specially Rule 80.

Consolidated stencils must be applied to all cars built new, rebuilt or repainted and must be applied at the BL (brakewheel end left side) and AR (A end right side) corners. The information required within the consolidated stencil must be maintained on existing stencils and updated whenever periodic lubrication (LUB) is performed. When applying a new consolidated stencil, all previously required information must be scraped and painted out after it has been transferred. However stenciled markings on air brake valves indicating reconditioning must not be painted over. Previous stencil markings must not be changed until all the work has been completed.

Stencils must be a minimum 11.5" X 16" to a maximum 14" X 24" in size. The information must be 1" high white figures, letters and border with 1/2" wide insert lines dividing the information. The background colour must be black and provide a sharp contrast that will remain legible for a minimum period of ninety-six (96) months. On cars where the location of the consolidated stencil is such that it would be obliterated due to spillage, a drip guard should be provided to protect the stencil.



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CONSOLIDATED STENCILS - continued

The following information is mandatory according to the 1994 AAR Field Manual;

- a) air brake control valve(s) standard to the car with service portion above and emergency portion below.
- b) brake pipe length (BPL) rounded to the nearest foot, for cars with a brake pipe length equal to or greater than 75 feet.
- c) built date (BLT) followed by the month and year. If the car has been rebuilt (REBLT) that month and year is also included.
- d) lubrication (LUB) followed by month and year last lubricated, the reporting mark of the railway/company performing the work and the location where the work was performed.

Other information which has been applied to stencils in the past and could still be seen until the next servicing are;

- a) clean, oil, test & stencil date (COTS) followed by the month and year, indicating when the control valve, either ABD or ABDW style was last serviced.
- b) repacked date (RPKD) followed by the month and year, indicating the date the friction bearings in the trucks were last serviced.

ABDW ABDX BPL 89	LUB 07-94 BCOL SQU
BLT 12-76 REBLT 07-94	

Knowing the built date and style of air brake equipment can be valuable information when detailing a prized piece of rolling stock.

AUTOMATIC CAR IDENTIFICATION "ACI"

In the 70's the automatic car identification or ACI label came into widespread usage on the railroads. This label was in fact a piece of tape measuring 10" wide by 22" high. It consisted of colored bands across the label that were read by a trackside detector. There were 13 strips in all and they varied in color (red, blue, black and black/white checkerboard). These labels were read by a scanner as the train passed the detector. A high intensity light was placed with the detector to illuminate the labels at night or during bad weather. The information encoded on the label allowed the detector to determine the car owner and car number. Decals are offered so you can detail cars that would be appropriately signed.



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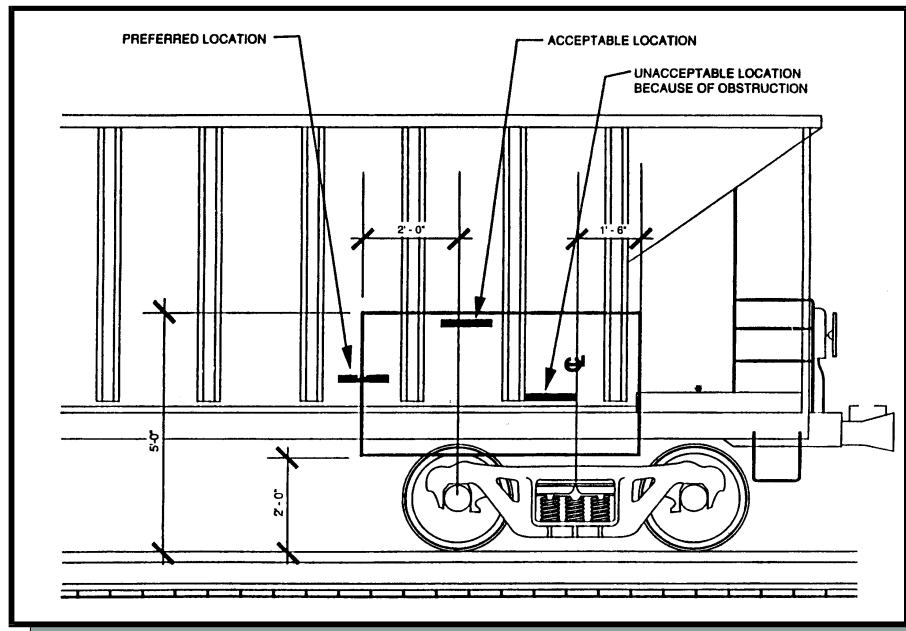
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AUTOMATIC EQUIPMENT IDENTIFICATION TAGS

The automatic equipment identification tag superseded the ACU label. It is a smaller and can be read magnetically. It can also be changed by railroad or vendor personnel. It is read by a magnetic trackside detector. The following diagram shows correct placement of the Tag.





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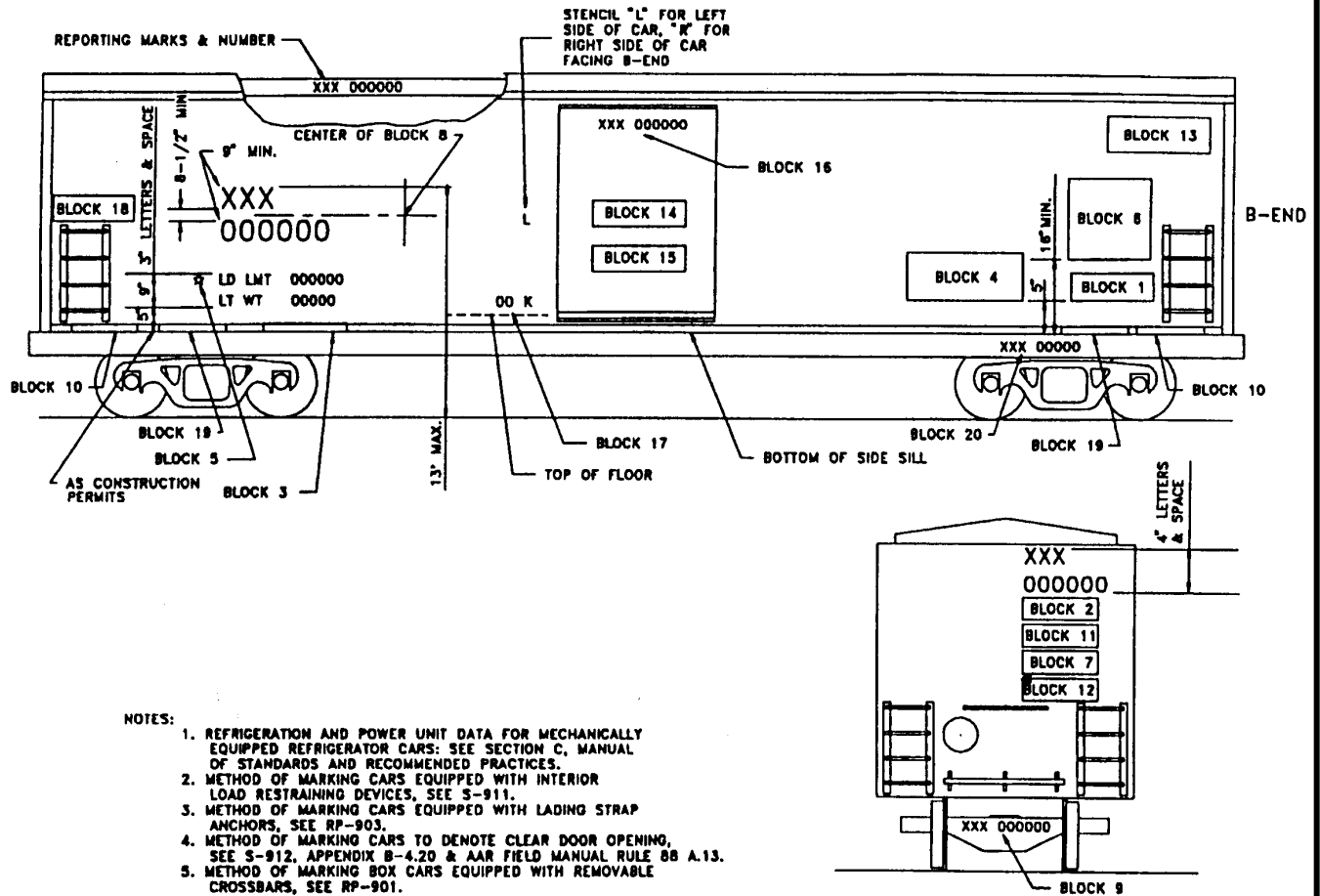
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MODERN LETTERING PRACTICE

The following information was taken for the Association of American Railroads Manual of Standards and Recommended Practices and is an example of one type of car lettering. Modelers are encouraged to contact the Kalmbach Memorial Library for information from this manual for other types of cars.



NOTES:

1. REFRIGERATION AND POWER UNIT DATA FOR MECHANICALLY EQUIPPED REFRIGERATOR CARS: SEE SECTION C, MANUAL OF STANDARDS AND RECOMMENDED PRACTICES.
2. METHOD OF MARKING CARS EQUIPPED WITH INTERIOR LOAD RESTRAINING DEVICES, SEE S-911.
3. METHOD OF MARKING CARS EQUIPPED WITH LADING STRAP ANCHORS, SEE RP-903.
4. METHOD OF MARKING CARS TO DENOTE CLEAR DOOR OPENING, SEE S-912, APPENDIX B-4.20 & AAR FIELD MANUAL RULE 88 A.13.
5. METHOD OF MARKING BOX CARS EQUIPPED WITH REMOVABLE CROSSBARS, SEE RP-901.
6. CARS SHOULD BE STENCILED AS NEARLY AS POSSIBLE IN THE SAME MANNER AS SHOWN IN THE BEST AVAILABLE LOCATION OFFERED BY THE CONSTRUCTION OF THE CAR.
7. SEE APPENDIX B - 4.17, 4.18, AND 4.19 FOR TYPICAL MISCELLANEOUS STENCILING.
8. SEE APPENDIX B-4.21 FOR FLOOR CAPACITY STENCIL, AND SEE S-911 FOR CAPACITIES LESS THAN 25,000 LBS.
9. REFRIGERATOR CARS ONLY HAVING CONVERTIBLE BUNKERS OR BULKHEADS ARE TO BE STENCILED TO SHOW IN ADDITION TO THE NORMAL INSIDE LENGTH AND CUBIC CAPACITY (BASED ON BULKHEADS IN SERVICE POSITION), THE MAXIMUM INSIDE LENGTH AND MAX. CUBIC CAPACITY WITH BULKHEADS IN EXTREME END POSITIONS. THIS ADDITIONAL STENCILING IS TO BE SHOWN IN PARENTHESIS. SEE APPENDIX B-4.3.



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BLOCK NUMBER	STENCIL REFERENCE	LETTER/NUMBER HEIGHT	GENERAL SPECIFICATION NUMBER	APPENDIX B	INFORMATION
1	OWNER'S CLASSIFICATION	4"	3.3.8	-	OPTIONAL; UNDER DIMENSION MARKING ON RIGHT SIDE OF CAR
2	SPRING STENCIL	1-1/2"	3.2.2 & 3.2.3	4.3	ON ENDS OF CAR IF CAR PERMITS; OTHERWISE, STENCIL ON OPPOSITE DIAGONAL CORNERS ON SIDE OF CAR
3	RESTRICTED LOADING STENCIL	1-1/2"	3.3.8	4.4	STENCIL ON SIDE SILLS
4	CONSOLIDATED STENCIL	1"	3.1.3	REF. AAR FIELD MANUAL RULE 80	ON BL & AR CORNERS, REF. AAR FIELD MANUAL RULE 80
5	LOAD LIMIT STAR	5"	3.3.4	-	STENCIL TO LEFT OF LD LMT; REF. AAR FIELD MANUAL RULE 70
6*	EAVES WIDTH, EXTREME WIDTH EXTREME HEIGHT, FLOOR HEIGHT, & EMPTY CENTER OF GRAVITY STENCIL	1-1/2"-2"	3.3.14-3.3.18	4.5	STENCIL ON LOCATION SHOWN
7	CUSHIONING DEVICE STENCIL	1-1/2"	3.2.8	4.8	STENCIL ON LOCATION SHOWN
8	PLATES "C, E & F" & EXCEEDS PLATE F STENCIL	REF. GEN. SPEC. 3.3.3	3.3.3	REF. S-913	STENCIL ON CENTERLINE & TO THE RIGHT OF CAR NUMBER & REPORTING MARKS
9	STENCIL OF REPORTING MARKS & CAR NUMBER ON TRUCK	1-1/2"-2"	2.5.1	-	STENCIL ON SIDE OF EACH BOLSTER FACING END OF CAR. FOR ALTERNATE LOCATION, STENCIL ON BL AND AR TENSION MEMBER OF SIDE FRAMES VISIBLE FROM ROADSIDE
10	HIGH FRICTION COMPOSITION BRAKE SHOE STENCIL	1-1/2"	3.2.5	4.7	STENCIL ON AL, BL, AR & BR CORNERS OF CAR
11	SPECIALTY EQUIPMENT STENCILS SUCH AS BRAKE BEAM OTHER THAN NO. 18, STEEL WHEELS OTHER THAN 35", ETC.	1-1/2"-2"	3.2.1	REF. AAR FIELD MANUAL RULES 8 & 41	STENCIL ON ENDS OF CAR AND PREFERABLY DIRECTLY ABOVE COUPLER IF CAR CONSTRUCTION PERMITS
12	SUPPLEMENTAL SNUBBING DEVICE STENCIL	1-1/2"	3.2.4	4.8	STENCIL ON LOCATION SHOWN
13	OWNERSHIP STENCIL	1"	3.1.5	-	WHEN REQ'D.; STENCIL LOCATION AT OWNER'S OPTION
14	PLUG DOOR STENCIL	5" LETTERS	-	4.1	STENCIL ON OUTSIDE OF PLUG DOOR TYPE SIDE DOORS
15	BULKHEAD STENCIL	5"	-	4.2	IF EQUIPPED WITH INTERIOR ADJUSTABLE BULKHEADS FOR LADING SECUREMENT, STENCIL ON OUTSIDE OF DOORS ON EACH SIDE OF DOOR
16	REPORTING MARKS AND CAR NUMBER ON PLUG DOORS	1-1/2"	-	-	STENCIL ON INTERIOR OF DOOR AT CENTERLINE WITHIN 1' AREA FROM TOP OF DOOR; OR IF DOUBLE PLUG DOOR, STENCIL AS NEAR AS POSSIBLE TO LEADING EDGE OF DOOR WITHIN 1' AREA FROM TOP EDGE OF DOOR
17	FLOOR CAPACITY STENCIL	5"	-	REF. AAR FIELD MANUAL RULE 88 A.13	STENCIL AAR DESIGN FLOOR CAPACITY ON SIDE OF CAR AT FLOOR LEVEL. REFRIGERATOR CARS BUILT WITH FLOOR RACK CAPACITY LESS THAN 25,000 LBS. ARE TO BE STENCILED IN ACCORDANCE WITH S-913.
18	SPECIAL STENCIL FOR REFRIGERATOR CARS	2"	-	4.10	FOR REFRIGERATOR CARS WITH STAGE ICING AND OTHER SPECIAL EQUIPMENT; STENCIL DIRECTLY TO LEFT OF CAR NUMBER
19	LIFT HERE AND/OR JACK HERE STENCIL	1-1/2"	-	4.8	OPTIONAL; STENCIL ON SIDE SILL WHEN CAR IS EQUIPPED WITH A LIFTING OR JACKING PROVISION
20	DIE STAMP STENCIL	1/2"	-	-	STENCIL REPORTING MARKS & CAR NUMBER IN 1/2" STEEL (DIE STAMP) STENCILING ON BL SIDE OF CENTER SILL INBOARD OF NO. 2 AXLE. FOR ALTERNATE LOCATION, STENCIL ON BL CORNER OUTBOARD OF BOLSTER.

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TYPICAL STENCILING

APP. NO.	TYPICAL STENCILING	APP. NO.	TYPICAL STENCILING
4.1	CLOSE AND LOCK DOORS BEFORE MOVING CAR (FOR PLUG DOOR BOX CARS ONLY) 5" LETTERING	4.13	IL-00-00 (STENCIL LENGTH OF CAR IN FEET AND INCHES)
4.2	CLOSE AND LOCK BULKHEADS AND DOORS BEFORE MOVING CAR (FOR BOX & REFRIGERATOR CARS ONLY) 5" LETTERING	4.14	XXXXXX ← LINING/PAINT MFGR. TYPE AND PAINT NO. APPLIED TO INTERIOR OF CAR XXX 00-00-00 ← REPORTING MARKS AND DATE (STENCIL IN 2" LETTERS & ALLOW 2" SPACES BETWEEN LINES)
4.3	QUANTITY INNER COIL INNER INNER COIL SPRG O OC DO O IC DO IIC DO OUTER COIL SPRING TYPE	4.15	HINGED DECKS MUST BE LOCKED DOWN BEFORE MOVING CAR NOTE: 1. FOR TRI-LEVEL CARS ONLY 2. STENCIL IN 1-1/2" LETTERS ON CONTRASTING BACKGROUND.
4.4	FOR RESTRICTED LOADING ONLY SEE EQUIPMENT REGISTER (1 - 1-1/2" LETTERS)	4.16	WHEN EMPTY RETURN TO AGENT XXX RR 0000-0000 (APPLIES TO MULTI-LEVEL CARS ONLY)
4.5*	EXH 00-00 W 00-00 EXW 00-00 H 00-00 EW 00-00 H 00-00 IL 00-00 (MAX 00-00) IW 00-00 IH 00-00 FLR HT 00-00 EMPTY CG 00-00 CU.FT. 0000 (MAX. 0000) THIS SECTION FOR BOX CARS ONLY NOTE: STENCIL EXH & EXH-W ONLY FOR CARS WITH HEIGHT EXCEEDING 15 FEET, 6 INCHES. STENCIL EXW & EXW-H ONLY FOR CARS WITH EAVES HEIGHT EXCEEDING 12 FEET.	4.17	7 1/2" 3 3/8" 2 3/8" 1 1/4" 5" 5" 6" DIA. 1" 1" USE THIS SYMBOL ALONE FOR CARS WITH LADING STRAP ANCHORS. ADD VERTICAL BARS WITH CARS WITH MOVABLE BULKHEADS ONLY. ADD HORIZONTAL BARS WITH CARS WITH REMOVABLE CROSSBARS ONLY. USE CENTRAL SYMBOL ALONE FOR CARS WITH HANDLING CONTAINERS OR AUTOMOBILE PARTS.
4.6	MFGR TYPE 00-00 (USE MANUFACTURER'S DESIGNATION FOR TYPE AND/OR MODEL NUMBER)	4.18	YELLOW BACKGROUND 1/2" 1/2" 3/4" WHITE BORDER BLACK STENCIL THIS CAR EXCESS HEIGHT
4.7	00 INCH HF COMP SHOES (USE 1-1/2" LETTERING)	4.19	YELLOW BACKGROUND 1/2" 1/2" 3/4" WHITE BORDER BLACK STENCIL KEEP OFF ROOF NO RUNNING BOARD
4.8	LIFT HERE AND/OR JACK HERE 3/8" ARROW 5" STROKE	4.20	OPENING W _____ H _____ STENCIL IN 1-1/2" LETTERS THE SIZE OF DOOR OPENING ON OUTSIDE OF DOOR ON ALL BOX CARS
4.9	H.B. CHAIN X/X" ALLOY 00" LONG CHAIN LENGTH	4.21	25K FOR FLOOR CAPACITY OF 25,000 POUNDS 50K FOR FLOOR CAPACITY OF 50,000 POUNDS STENCIL AAR DESIGN FLOOR CAPACITY ON BOX AND REFRIGERATOR CARS ONLY
4.10	FANS STAGE ICING CONV. BUNKERS 2-1/4" TYP. STENCIL IF APPLIES	4.22	EXCESS HEIGHT CAR STENCIL IN 5" MIN. BLACK LETTERING
4.11	L-00-00 (STENCIL LENGTH OF CAR IN FEET AND INCHES)	4.23	LOWER & LOCK HINGED DECK CLOSE & LOCK DOORS BEFORE MOVING CAR FOR TRI-LEVELS ONLY
4.12	CHAIN TIE DOWNS QUANTITY 000 CORRECT NUMBER DIAMETER & TYPE CHAIN SIZE XXX XXXXX LENGTH OF ASSEMBLY XXXXXXXXX WORK LOAD LIMIT 0000 (1" LETTERS WITH 1/2" MIN. SPACES BETWEEN LINES) CORRECT CAPACITY		

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