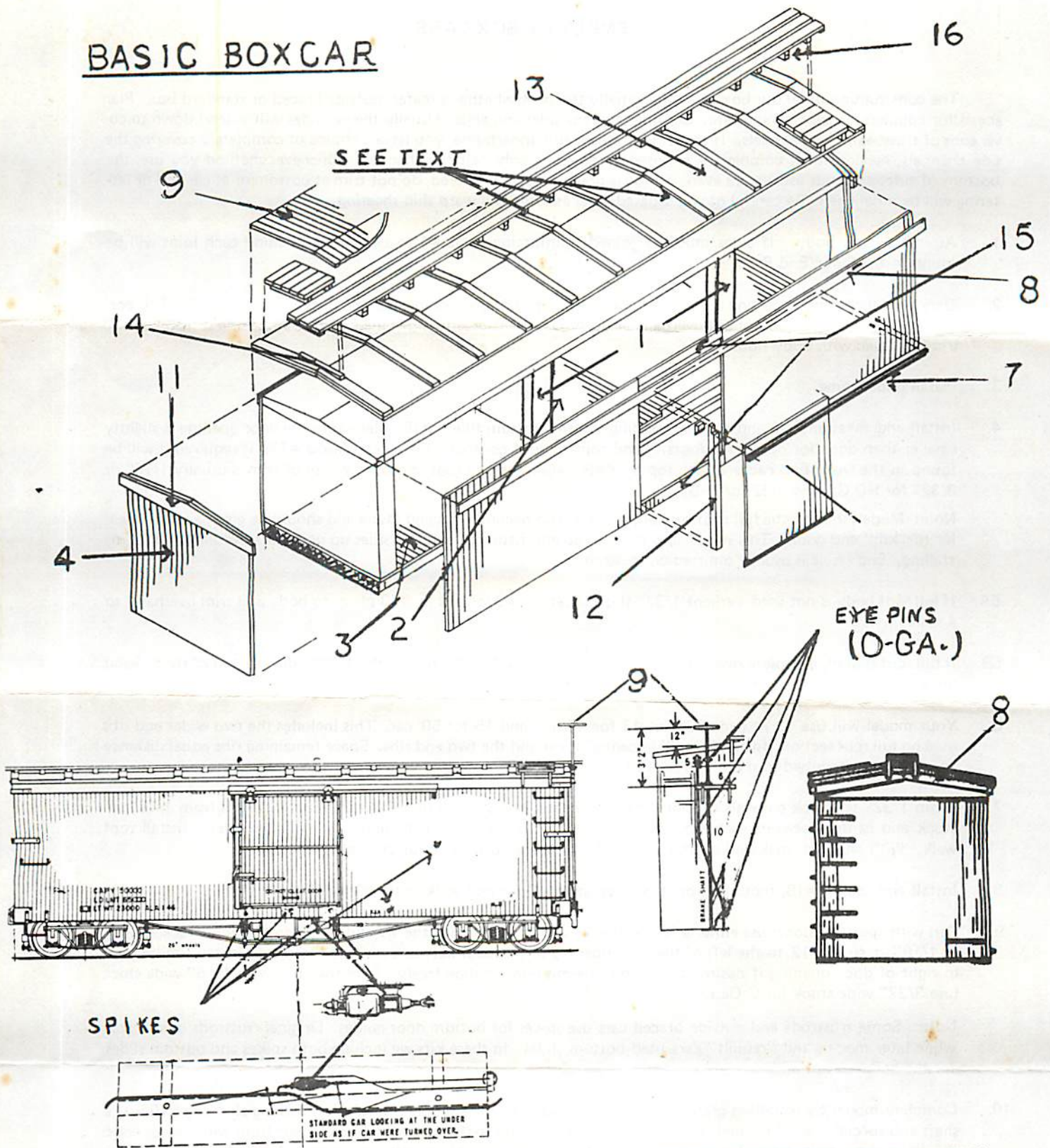


BASIC BOXCAR



CAL-SCALE
WESTINGHOUSE
AIR BRAKE

H. D. SCALE MODELS
Sterling Junction, Mass. 01565

ASSEMBLY OF BOX CARS

The construction of all our box cars is essentially the same whether a reefer, outside braced or standard box. Plan ahead for couplers, truck clearance etc. Consider also the sides and ends. Usually the car sides will extend down to cover ends of trussbeams or channels. If model uses a fishbelly underframe, you have a choice of completely covering the side channels, leaving them completely exposed or covering only half the channel. Whichever method you use, the bottom of sides and ends usually are even. If side is prepainted and lettered, do not trim at bottom or at car end or lettering will be misaligned. Be careful of water based glues as some will warp thin sheeting.

1. Assemble basic body. If sides must be joined, reinforcing studs #1 to be centered behind each joint will be found in the Door/End Pack.
2. Only models having operating doors use floor sheathing. Locate opening and install center section #2. It is correct size and shape but do not cut overhang at opening until after side is installed. The #3 flooring is installed and trimmed even with body floor.
3. Install underframe.
4. Install end sheathing #4 and car sides adding top and bottom fillers #15. Make sure the door opening is slightly smaller than door for operating doors. Sand tops to roof contour. Install end fascia #11. If required it will be found in the Door/End Pack. Install top trim #8. Again sand to roof contour. Width of trim is usually 1/16" or 3/32" for HO Ga. and 3/32 for O-Ga.

Note: Models that use the full roof section, the roof end becomes the end fascia and should be given a coat of sealer to "kill" end grain. This model also requires careful fitting of end and sides up under the overhang before installing. End fascia is usually omitted on trussrod cars.

- 5A. If full roof body is not used, cement 1/32" thick sheeting, #9 scribed or #13 plain, to body and trim overhang to 4 scale inches.
- 5B. If full roof is used, complete overhang by cementing 1/32" x 1/16" strip, on the 1/32" edge, to end of roof. Sand top even with top of roof and reinforce the joint with wide roof rib.
6. Your model will use 11 ribs for 36' car, 13 for 40' car and 15 for 50' car. This includes the two wider end ribs used on full roof section. Install first rib in center of car and the two end ribs. Space remaining ribs equal distance apart. With #9 scribed roof omit all roof ribs.
7. From 1/32" sq. stock cut walk supports #14 and center one on each rib. Cut additional supports from 1/16" sq. stock and center between each rib. Pass sandpaper block over tops to flatten slightly and even. Install roof walk. With #9 roof, make all supports from 1/32" stock spacing about 20 scale inches apart.
8. Install end walk, #18, mounting on 1/32" sq. strip. Omit end walk with #9 roof.
9. Cars with operating doors use either a "Z" section or a door channel for the #7 slides. When the door track is used, fit 1/16" sq. strip, #12, to the left of the door opening to fill space between car side and door. Install similar strip to right of door opening if desired but sand to permit door to slide freely. Trim the door with 1/16" wide stock (use 3/32" wide stock for O-Ga.).

Note: Some trussrods and outside braced cars use spikes for bottom door guides. Original trussrods used spikes while later models and "rebuilt" cars used bottom slides. In these kits we include both spikes and bottom slides for the builder's option.

10. Complete model by installing grab irons, sill steps, ladders, brake details, etc. Wire for making air pipe, #10 brake shaft and special grabs if needed is included. Secure pipe and shaft with small hooks, bent from wire, to car ends. (In place of eye bolts called for in the O-Ga. car.) Form air valve by doubling back end of wire sharply and filling in with a generous application of paint. Secure ends of pipe and shaft underneath car with sharp "J" bent. To prevent splitting underframe channel, drill clearance for the sill steps and secure them with a "blob" of cement inside channel where it won't be seen.

NOTE FOR O-Ga. MODELS ONLY:

Eye pins are included to secure brake shaft and air pipe. Note also that the sill step has one leg longer than the other. Be sure to insert so longer leg inserts into the car end for greater strength. If necessary to bend to clear trucks, do so before inserting. A few models require building the brake platform #6. If this is such a model, platform parts are in grab iron pack. Insert the two brackets into car end and secure the wooden platform with a drop of cement.