

III. 4-Wheel Cars

4-wheel cars have two wheelsets that are in a fixed position. They are built either with journals mounted on an underframe or by a single truck mounted to the body. The latter are called 1-truck cars.

They are available as ready-to-run (RTR), kits, or by kitbashing and scratchbuilding.

Ready-to-Run (RTR)

Bachmann Trains Dump Cars

Both styles of 4-wheel cars come three to a box and include E-Z MATE® HO automatic couplers. Chassis are die cast metal.



Wood Side-Dump Car #29801

An older style car. The body tilts to either side and the corresponding side lifts up to allow the load to dump.



V-Dump Car #29802

This represents an all metal car and the dump body is in a V shape. Body tilts side-to-side to unload.

Granite Creek Enterprises Backwoods Line

These 1-truck cars are made of basswood and feature a Bachmann truck, Kadee HO couplers, and Grandt Line detail parts. Numerous types of cars are available.



Dynamite Car #BX-1



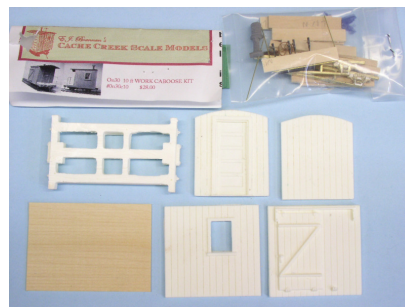
Water Car #TC-3



Flat Car #F-8



Gondola #G-8



Components of the kit.



Backwoods Caboose #C-8



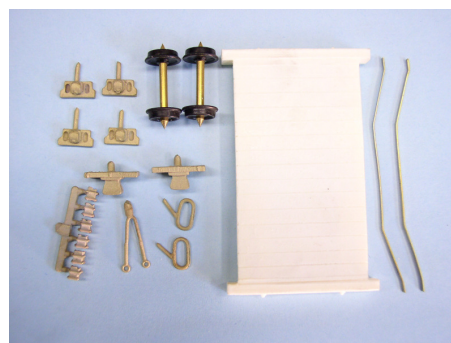
Completed kit with added spoked wheelsets and Kadee HO couplers. The body was painted brown and then wiped with a dry cloth to simulate faded paint.

Miniatures By Eric—Plantation Sugar Cane Flatcar Kit #0HK4T

The body is cast out of resin and the detail parts are brass. Includes wheelsets and link and pin couplers.



Tender with Water Tank #T-4



Resin floor and brass details.

Kits

Cache Creek Scale Models—10ft. On30 Work Caboose Kit #On30c10

This kit has resin sides, ends and frame; a basswood and paper roof and a basswood floor. Sideframes are brass. Also Includes railings, smokejack, and brake wheel; does not include wheelsets and couplers.



Body painted flat olive green. Floorboards painted flat light brown to simulate wood.

Kitbashing an On30 Flatcar from a Bachmann HO Bobber Caboose

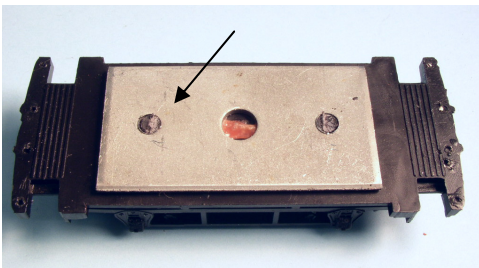
Quite a few HO scale 4-wheel chassis are available but the majority of these are either of English or German manufacture and may be hard to find or expensive. The Bachmann HO bobber caboose is still available and now has automatic couplers and metal wheelsets. This makes it a great starting point for an On30 4 wheel car.



A current production model of the Bachmann HO bobber caboose.

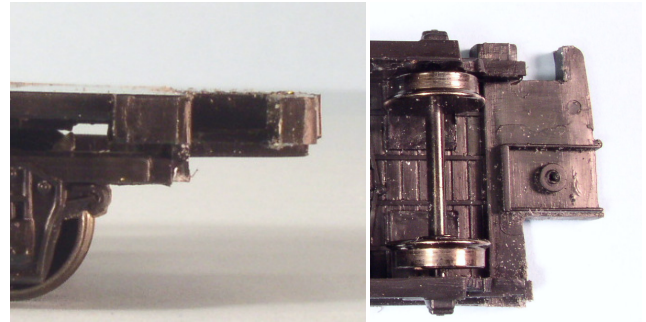
Parts List

- (2) Sides: 3" X 3" X 11' 0"
- (2) Fillers: 3" X 3" X 7' 6"
- (4) Ends: 3" X 6" X 2' 6"
- (4) Corner Braces: 3" X 9" X 18" - trim to fit
- (4) Overlays - 2 each
 - .010 X .060 X 6' 6"
 - .010 X .125 X 6' 6"
- (8) NBW: Grandt Line #5096
 - HO 2 1/2" Nut, 6" Square Washer
- (2) Side Sills: 2" X 6" X 11' 0"
- (8) Stake Pockets: Grandt Line #73
 - O Single U-Bolt
- (21) Floorboards: 2" X 6" X 5' 6"
- (8) Stakes: 4" X 4" X 3'

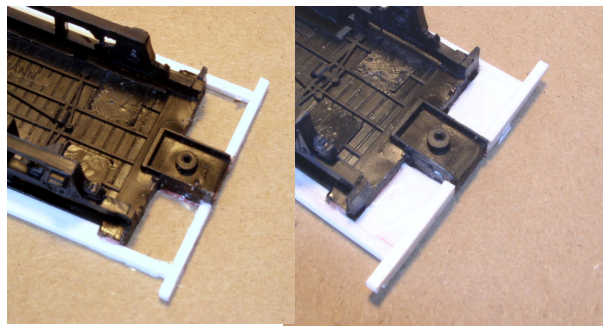


1. Chassis

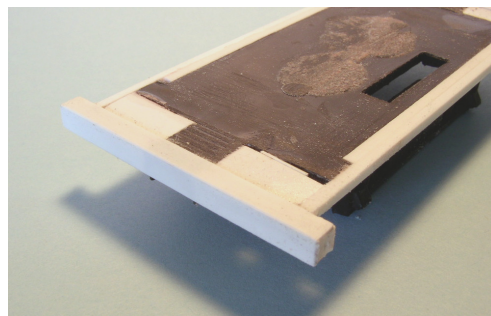
Remove the body and details. Remove the weights by cutting off the plastic nubs and prying off the weights.



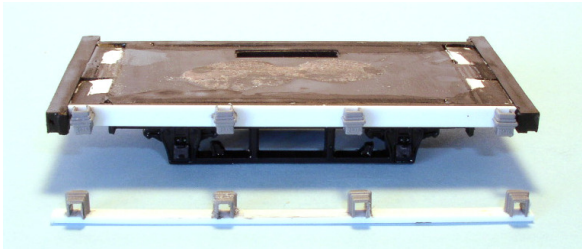
Left: cut out the steps with plastic nippers, but leave the sideframe. Right: cut out the end beam. Cut along the line where the platform meets the rest of the chassis and cut down the side of the cast in draft gear. Do all four corners.



Left: build the car upside down. Glue on the sides and ends. The ends butt against the draft gear and are even with its front edge. The sides butt against the ends and attach to the nubs on the side of the chassis. The fillers glue in between the nubs, and to the chassis and sides, to keep the sides from collapsing. Right: add the corner braces.

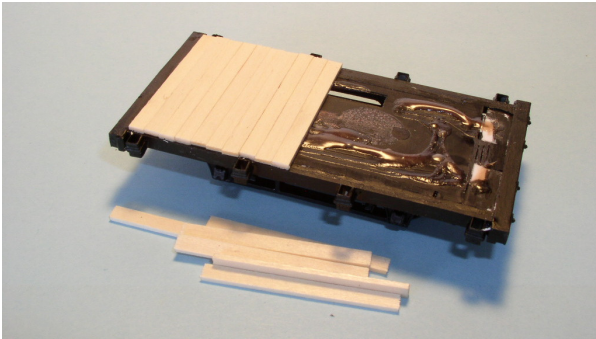


When the assembly has dried overnight, sand the ends and the top smooth. Glue on both overlays--they give the appearance that there is a solid endsill. Glue on the NBW's. The inner pair are 9" from the center of the draft gear and the outer pair are 27" from the center of the draft gear. Center vertically. Paint everything flat black.

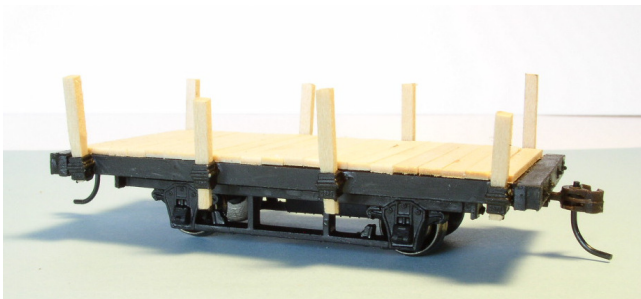


2. Flatcar Body

Four stake pockets are glued to each side sill and the side sills glued to chassis. Paint flat black.



Attach floorboards with Walther's Goo.



Stakes are whittled to fit the stake pockets. Couplers and wheelsets are added. Car can be further detailed with stirrups, a brake wheel and weathering.

Scratchbuilding 1-Truck Cars

1-truck cars are built on a single truck. The advantage of this is the ability to negotiate sharp curves, an economy of parts and materials, and the ability to build several cars in very little time. Construction can be speeded up by creating a standard body design.

The only prototype 1-truck car is the logging disconnect in which a beam is mounted crosswise on the truck and each end of a log is chained to a beam/truck. This uses the log as the body of the car. Couplers are located on each end of the truck so the disconnects can be made into a train once the log is removed.



Granite Creek Enterprises Logging Disconnects

Construction of two different cars will be described. The blue car rides on an HO truck and has HO couplers. The yellow car has an HO coupler on one end and an On3 coupler on the other. It rides on a Bachmann On30 truck. It's purpose is to show how to use either HO or On3 couplers with the Bachmann truck and to provide a method to mix HO based cars and On3 based cars.



HO based car rides on an HO truck and has HO couplers.



This hybrid car rides on a Bachmann On30 truck and has both HO and On3 couplers.

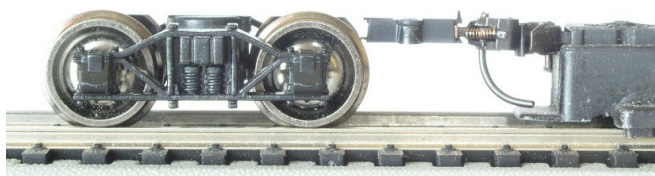
1. Trucks and Couplers

Before construction can begin, coupler height must be determined. Since there will be three coupler/truck combinations, planning has to be done for all three.

Cut two strips of styrene .060 X .250 X 2". CA glue an HO coupler to the end of one strip and the On3 coupler to the end of the other.



Set the HO truck and a Kadee HO coupler height gauge on the track and then set the styrene with the HO coupler on the truck bolster. The photo shows that the truck coupler is lower than the gauge coupler by 1/8" which means a 1/8" thick body bolster is needed.



Bachmann On30 truck with HO coupler at Kadee HO coupler height gauge. The truck coupler is higher than the gauge coupler by .030, therefore a pad is needed to lower it.

The On3 coupler came out at the correct height.

2. Body Size

Another consideration is the size of the car body. The method presented here is arbitrary and can be changed as needed. Measure the truck length over the outer edges of the wheel flanges, and measure the width over the journal boxes. Add two scale feet to the length and eighteen inches to the width.

HO: L = 4' 9", W = 4' 6"	On30: L = 6', W = 5'
L: add 2' + 4' 9" = 6' 9"	L: add 2' + 6' = 8'
W: add 18" + 4' 6" = 6' 0"	W: add 18" + 5' = 6' 6"

Determining body size for the two cars.

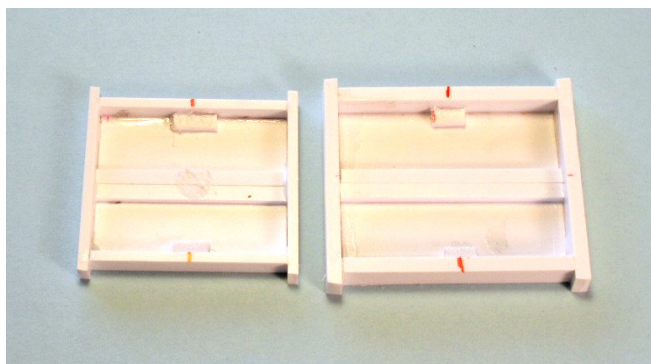
Blue Car Parts List (HO/HO):

- (1) Core: .040 scribed sheet 1 1/4" X 1 1/2" (scribed lines go across the width, spacing of lines is not important)
- (2) Coupler Strips: .060 X .125 X 1 1/2"
- (2) Sidesills: .080 X .188 X 1 1/2"
- (2) Endsills: .080 X .188 X 1 5/8"
- (2) Bolster Rests: .060 X .125 X .250
- (1) Bolster: .125 X .250 X 1 1/4"
- (1 pr) Couplers: HO Kadee #5
- (1) Truck: Kadee #500 Arch Bar Truck
- (1) Truck Screw: #1 X 1/4" wood screw

Yellow Car Parts List (On30/HO, On30/On3)

- (1) Core: .040 scribed sheet 1 3/8" X 1 3/4" (scribed lines go across the width, spacing of lines is not important)
- (2) Coupler Strips: .080 X .125 X 1 3/4"
- (2) Sidesills: .125 X .250 X 1 3/4"
- (2) Endsills: .125 X .250 X 1 1/2"
- (2) Bolster Rests: .080 X .125 X .250
- (1) Bolster: .125 X .250 X 6' 6"
- Coupler Pads for HO coupler:
 - (1) .125 x .250 X 3' 4"
 - (1) .030 x .250 X 3' 0"
- (1) Coupler: HO Kadee #5 coupler
- (1) Coupler: Kadee # On3 coupler
- (1) Truck: Bachmann #29901 Arch Bar Truck
- (1) Truck Screw: Bachmann Truck Mounting Screw

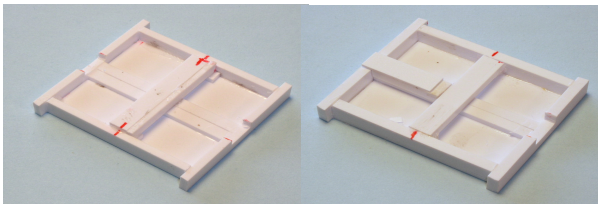
3. Construction



See bottom of previous page. Left: HO car. Right: hybrid car.

Lay the scribed side of the core facedown as the car is built upside down. The scribed lines will be used to lineup the floorboards. Measure across the width at each end and mark the center line with a Extra Fine Point Sharpie or very lightly scribe with a razor knife blade. Glue one of the coupler strips on each side of the line. Make sure the first one stays in place when the second is installed. This automatically provides a center line to which the couplers and the truck are mounted. Glue on the sidesills.

Measure along the length of the car, find the center, and glue in the bolster rests. Let this dry a few hours and then trim the ends if necessary and glue on the endsills.

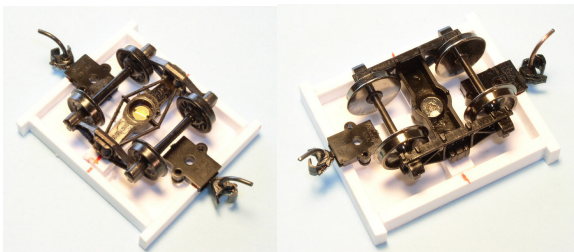


Left: Notch out the endsill for the Kadee coupler pocket. The pocket is $5/16$ " wide, so the notch will be $5/32$ " on either side of the centerline. Make sure the draft gear rests level on the pad and fits into the notch.

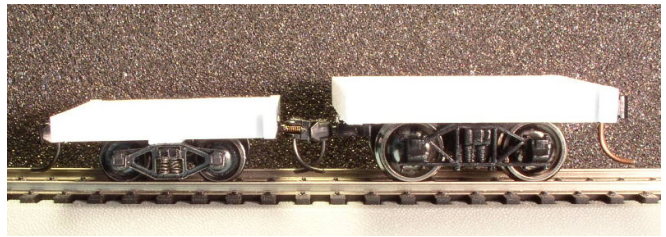
Right: The Kadee On3 coupler pocket is $3/8$ " wide so cut $3/16$ " on each side of the center line and notch the endsill the same as above.

For the HO coupler, butt the large coupler pad against the endsill and then glue on the small pad flush with the endsill and recessed slightly from the bolster to allow the truck to set.

Mark each end of the bolster on the width and glue on the bolster rests, centered on the length. This assembly must be dry before continuing or else the pieces can move out of place.



Drill a hole in the center of the bolster. Cut off one-third of the screw and install the truck. Build the couplers and glue the lid to the box. These can be attached to the body with styrene cement or CA glue.



Left: due to the coil springs on the HO truck, the body tilts. If this is undesirable, use an unsprung truck or level the truck and use CA glue to glue the sideframes in place on the bolster. Another option is to glue small pieces of styrene on the sidesill which touch the sideframes and hold them in place. Right: the HO coupler is shown on the left and the On3 coupler on the right.



Blue car: Mt. Albert and Kappler basswood added as floorboards and racks. Cut twigs represent small logs.

Yellow car: Mt. Albert and Kappler basswood added as floor and rails. Hamm River Products Steel Drums and Crates added for load detail.