

Kadee Kit

Cars



40 & 50 Foot PS-1 Box Car Assembly Instructions

Push the #2100 coupler/stirrup assembly onto the ends of the metal floor. Slide them into the slots and slightly lift the ends (wings), then press firmly on the front end of the draft gear box. **DO NOT PRESS ON THE COUPLER.** The wings will slide over the locking tabs and snap into place. Press the wings down flat so that the stirrup ends are in the corner grooves. Set the assembly aside.

Airline (Train line or S Tube) assembly: First, notice the pipe union (small bulge or nub) in the line. This should line up with the AB valve when assembled. Slip the longest end (the one with the nub) through the opening between the Z bar cross rib of the underframe (the one with the AB valve platform attached) and the inside air pipe that runs to the reserve air tank. Slide it through to where the nub is between the two air pipes and the bend is at the crossover slots in the center beam. With the underframe facing up, weave the air line under the smaller Z bar ribs, over the larger cross beams, and into the slots of the center beam crossover. The airline should now lie even through the underframe, fit into the slots of the bolsters and protrude from the ends of the underframe. It shares the same slots as the brake rigging rod ends.

Lay the metal floor on a flat surface with the bolster (bottom) side up. Place the underframe assembly onto the metal floor. This entire chassis assembly is now ready for truck installation. Lay the chassis back on a flat surface and fit the small square airline tabs into the notches on the end of the floor.

Truck installation: With the chassis assembly rigging-side-up, put the centering bushing and the screw into the truck bolster. Note the direction of the wedge that fits the shape inside of the bolster. Place the truck onto the chassis's bolster. While carefully tightening the screw, lift the truck slightly so that the bushing can index into the matching points on the bolster. Keep the truck aligned while you tighten the screw... just snug, but not too tight. Turn the chassis over and let the trucks hang free. Make sure they pivot and re-center by themselves without hindrance. Push the truck up... it should pivot freely, and then fall back into place when you release it.

Body assembly:

Place the retainer valve and line on the "B" end of the body. Start with the center pin on the valve line; press it in just part of the way. Then, while keeping the line straight, press in the other two pins just part way. Finish by pressing in the center pin and two other pins all the way.

Carefully cut the side ladders from their sprues. Place the ladder with the offset end on the car. Press in the top pegs first until the curved end of the runner touches the body surface. Press directly on top of the pegs only. Now, press in the remaining pegs to match the top ones. Note: The pegs have a taper and should be pressed in until only the straight portion is showing. "Helpful Hint:" set all the pegs in place, then turn the body over on a flat surface. Press down gently to apply equal pressure to all the pins.

Very carefully cut a side grab iron off its sprue... one at a time as needed (4 ea.). Cut against the outside edge of the mounting bracket so no piece extends beyond the bracket. Use a tweezer to place the grab iron pegs into the holes. Then, press on the end or top of the peg (the small flat part of the bracket) until the bracket touches the body surface. Use a tool with a flat tip, or the tip of your fingernail, to apply pressure. The split tip of Kadee® #1020 Tweezer works very well for holding and pressing the grab irons.

Carefully cut the end ladders from their sprues. Fit them into their holes and press in the top pegs until the curved tips of the runners touch the body surface. Press in the remaining pegs until they match the top. Be sure the runners are even and level, and press only on the top of the pegs.

Carefully cut the end grab irons from their sprues... one at a time as needed. For the top grab iron, make sure the longer side of the bracket is on the bottom. Press in the pegs until the bracket touches the surface (similar to the side grab irons). Set the bottom grab iron into the holes, making sure the brackets are correctly orientated (square) to the body's edge. Gently press in the pegs as above. Since the bottom grab iron pegs protrude through the body, trim the inside tips of the pegs flat against the inside of the body. Note: If you neglect to trim the tips of the grab irons, the underframe will push the lower grab irons out of position.

Body to Chassis: Note the orientation of the brake wheel end of the body ("B" end) to the chassis. The two rods point to the B end and the air tank and AB valve are opposite. The cone shaped end of the piston points to the B end. Make sure the tabs of the airline are in their notches on the floor (they cannot be put in place after the body is attached). Slightly spread the body sides and fit the chassis in place. It should snap in place and be even with the bottom edge of the body. The small tabs on the sides of the floor will be recessed into slots on the inside of the body.

Slide the rod from the bell crank between the coupler box and the floor runner under the truck into the slot in the chassis bolster cross beam. Turn it over (which hooks the "L" end into the slot) to bring the square tab up to the slot in the floor. Hook the small lip of the tab up into the slot. The tab should fit flush with the bottom of the floor. Slightly twist the brake wheel rod to bring the gear housing up to the rectangular hole. Press in the housing until it snaps into the hole. Then press the pin at the center of the rod into its place.

Place the brake step into its mounting holes and press in the pins until the brackets touch the body surface. This captures the retainer valve line and the brake wheel rod and chain.

With a slight twist, bend the coupler release bar behind and under the lip of the striker plate of the draft gear box, then over to the tab at the corner of the body. To prevent damage to the tab, hold the tab and very carefully squeeze the pin and tab together.

Turn the brake wheel end (the B end) of the body toward you. Place the roof walk along the top of the car body, orienting the notch in the pegs to your right. Starting at the B end, run your finger down the roof walk, pressing evenly so the roof walk does not get bumpy. The pegs should snap into place (the pegs will not "snap" in if they are not positioned correctly). Carefully fit the end bracket pins into their holes and press them in until the brackets are against the surface. Use a small flat tool or your finger nail to apply the pressure.

The sliding doors are installed by inserting them through the door openings at an angle of about 30 degrees. Hook the top guide bar behind the right side of the door opening. The clip on the bottom left corner of the door can now be fitted into the lower left corner of the opening. Rotate the door counterclockwise until it snaps into place. The door should slide easily without binding.

Test the car using our #205 or #206 coupler height gauges to check for the correct coupler height.

Contents

- 1 ea. Body (Shell)
- 1 ea. Die Cast Metal Floor
- 1 ea. Roof Walk (running Board)
- 1 ea. Plastic Underframe
- 2 ea. Doors
- 2 ea. Stirrup-Coupler Assembly: Coupler, Lid, Centering Spring, Draft Gear Box Stirrup
- 1 ea. Brake Wheel Assembly: Hand Wheel, Gear Housing-Bell Crank (Fulcrum)-Rod
- 1 ea. Brake Step
- 2 ea. Placard Board (Tack Board) Attached the the Body Ends
- 1 ea. Pressure Retaining Valve-Air Pipe
- 1 ea. Brake Rigging (one piece): AB Valve, Cylinder, Slack adjuster, Levers, and Rods
- 1 ea. Airline (Trainline) S-Tube
- 2 ea. End Grab Irons, Upper
- 2 ea. End Grab Irons, Lower
- 4 ea. Side Grab Irons
- 2 ea. Side Ladders, Straight Runners, Offset Top Ends
- 2 ea. Ends Ladders, Belled out Lower Right Runner
- 2 ea. Truck Assembly: Wheelsets, Bolster, Side frames, Coil Springs, Clipped on Brake Pads (Shoes)
- 2 ea. Self Centering Bushing for Truck Bolster
- 2 ea. Metal 2-56 Self Tapping Screws

Helpful Tools

- Kadee #1020 Tweezers
- Kadee #231 Grease-em Dry Graphite Lubricant
- Small Phillips Screwdriver
- Sharp Nippers
- Sharp Hobby Knife or New Single edge Razor Blade
- Common Tweezers (Your favorite Hobby Tweezers)
- Magnifying Glass, Optivisor, etc.







