

Minimodels

NSWGR "N" CARS

KITS IN THIS SERIES

- M300 FN SECOND CLASS CAR
- M301 BN FIRST CLASS CAR
- M302 RFN BUFFET CAR
- M303 HFN SECOND CLASS TERMINAL CAR

Other cars which may be "kit-bashed" from these models include: FNR & FRN Buffet Cars, HN Terminal Car, alternative HFN (as converted from FN and with square ends), CN & SCN Composite Cars and, with some determination, a BAM sleeper.

These instructions cover typical configurations and if a specific car is to be modelled as at a specific date photographs should be consulted for detail accuracy.

CHECKLIST

- 1 x Roof moulding
- 2 x Body sides
- 2 x Floor sections (sprues includes buffer beams)
- 2 x Ends (on 1 sprue with 2 ends & 4 vents)
- 2 x Old style multi-piece bogie sprues
- 2 x Door & fittings sprues
- 2 x Powerline one piece 2AN bogie mouldings
- 4 x Powerline metal wheelsets
- 1 x Length of handrail wire
- 1 x Bag of window mouldings
- 2 x Bogie mountings
- 8 x Large roof vents
- 1 x Plastic strip

Please check your kit thoroughly before assembly and contact Hobby Wholesalers if any item appears to be missing.

NOT INCLUDED IN THIS KIT:

Because these models can be used to cover a wide historical period and carried many different liveries, paint and decals are not included. Gunze Sangyo "Aqueous Colour" paints are recommended.

Glue: Gunze Sangyo "Mr CEMENT DX" C-127 liquid polystyrene cement is recommended. "SupaGlue" is required to attach bogie mountings to the floor.

Bogie mounted Powerline couplings are included in the kit. If Kadee Couplings are required, No.8 is recommended.

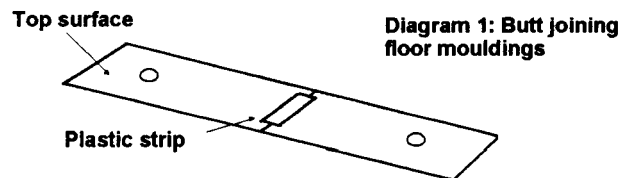
Metal axle bearings are required if original style bogies are to be used. Kadee couplings must also be fitted if these bogies are to be used.

ASSEMBLY INSTRUCTIONS

STEP 1 - FLOOR PREPARATION

The floor is moulded in two identical pieces. Assuming you are fitting the Powerline bogies, identify the bogie mounting position (this is a rectangular area, with a raised edge, about 1/4 length from one end of each floor moulding) and drill 6mm (1/4") diameter right through.

The floor pieces must be butt joined. To assist with alignment and strengthen the joint a 20mm length of plastic sheet is provided. This should be glued onto the top surface of the joint as shown in Diagram 1.



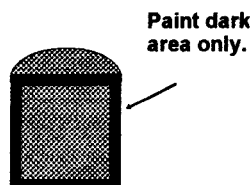
STEP 2 - SIDE PREPARATION

Before assembling the body, it is recommended that the sides be painted, the window frames painted (if required), and the windows be glued in.

When cleaning up the side mouldings take care not to break the thin part of the mouldings above the door openings. The lugs in the windows (not on all models) should NOT be removed because these are used to locate the window glass mouldings.

For the main colour spray painting is recommended - either by air brush or modellers spray cans. DO NOT USE AUTOMOTIVE SPRAY PAINTS or "TOUCH-UP" CANS - they usually contain lead (which is poisonous) and may also damage the plastic. It is recommended that the door and end mouldings be painted at the same time as the sides, but not fitted at this stage.

Diagram 2:
Window painting.



As originally built the cars had frameless windows, and if the models are to represent this period, the window frames should not be painted. For the majority of their lives they have carried framed windows, and for all but the original red and cream livery the window mouldings should be painted as per diagram 2.

Once the paint on the side and window mouldings is fully dried, the windows should be fitted to the sides. This is

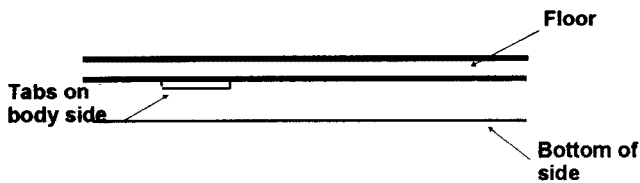
done from the outside of the car, laying the side face up on a flat surface. Each moulding should be tried for correct fit before gluing into place.

Once the glue has dried the toilet and washroom windows should be painted white on the inside. These are the windows between the doors and the ends of the cars - a total of four (4) per car, except on the HFN which only has these windows on the non terminal end.

STEP 3 - BODY ASSEMBLY

Start by gluing one side and one end to the floor, then add the other end and the other side. The correct positioning of the floor mouldings relative to the sides is shown in Diagram 3.

Diagram 3: Floor Position (from inside of body)



Next fit the cross stretchers between the tops of the body sides as per Diagram 4. These stretchers are the plain mouldings on the floor sprues, and should not be confused with the buffer beams.

Diagram 4: Cross Stretchers

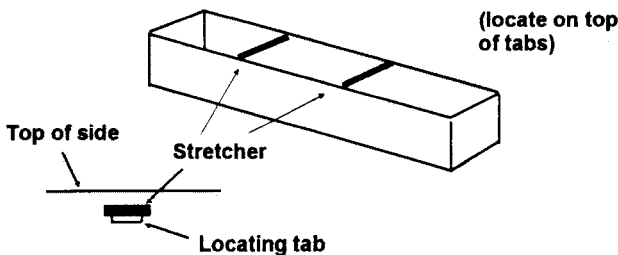
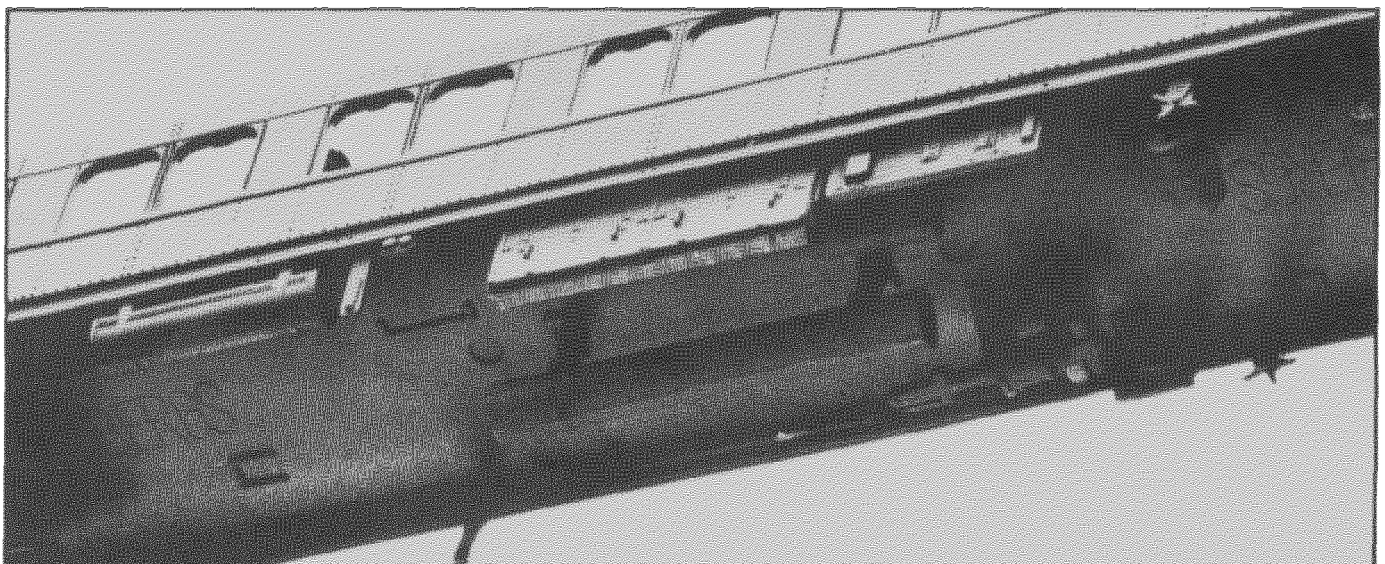


Diagram 5: Underfloor details.



Now fit the door mouldings. This is best done by painting a little glue on inside of the body and sliding the door up from underneath through the gap between floor and side (taking care with the paint) until the step lines up with the bottom of the chassis. If you have an HFN car you can compare the position of the separate doors with the position of the moulded-in door.

Finally drill out the handrail holes on each side of the car. Every car has one handrail (ie: two holes) on each side of each of the separately moulded doors. On each end of the FN, BN and RFN, there is also one vertical rail, marked with small holes. On the HFN there are NO vertical handrails adjacent to the moulded-in doors at the terminal end, however there is a horizontal rail from that door to the body end on each side of the car. At the non-terminal end of the HFN there is the usual vertical rail as per the other cars.

The wire handrails should now be carefully bent and fitted.

STEP 4 - BUFFERS & BUFFER BEAMS

You have a choice of three styles of buffer plates:

- Full width, round ends
- Full width, square ends
- Narrow, without buffer shafts

All cars within sets must have the narrow version, except for the outer (terminal) end of the HFN which has the round ended full width version. Independent (ie: not permanently coupled into a set) cars normally have the square ended full width version on both ends.

If the narrow version is to be used the buffer shanks must be removed from the buffer beams. Because the beams are so thin great care must be taken in doing this and it is better to start the cutting before removing the beam from the sprue.

Once again, because the buffer beams are so thin, even if you are not using KADEE couplings fit the small four legged coupling mounting platforms (on the multi-piece bogie sprue) to strengthen the buffer beams - see

Diagram 6: Buffer Beam fitting

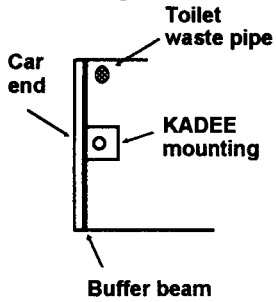


diagram 6. The narrow buffing plates should be glued to the bottom of the corridor connectors.

Where full width buffer plates are to be fitted, do not fit them until after the car has been fully assembled and final painting completed.

STEP 5 - UNDERFLOOR DETAIL

The underfloor detail should now be assembled and fitted as per Diagram 5 (previous page). Note that many parts (eg. tanks, generator) are moulded in several parts and have to be glued together before gluing to the floor. There are various marks on the underside of the floor to assist you to correctly locate these details.

At the end of this step you will find a number of duplicate parts which are not used. Do not discard these: they are sure to come in useful in other modelling projects.

Toilet outlet pipes should be fitted as shown in diagram 6. One is fitted to each end of all cars except HFN which does not have one at the terminal end.

STEP 6 - BOGIE MOUNTINGS

If you are using the snap-in Powerline Bogies provided, then glue the single piece grey moulded mountings provided onto the floor with "Supa Glue" - plastic cement will not hold. If you wish to use the multi-piece early style bogies (remembering that in this case you must buy axle bearings and must fit KADEE couplings) fit the large four legged mounting piece provided on the multi-piece bogie sprue.

STEP 7 - ROOF DETAIL

When originally built the cars had forced air ventilation and only had two small vents in each end of the roof for the toilets and washrooms. The HFN did not have these vents at the terminal end as it only had amenities at the train end. When the forced ventilation was removed a string of larger round vents were added down the centre line of each car. For the position of all of the vents see Diagram 7. Centre line vents MUST be fitted to the RFN as they were converted from FNs well after the end of the forced air ventilation period. The roof should be painted before attaching to the body.

STEP 8 - FINAL PAINTING AND FINISHING

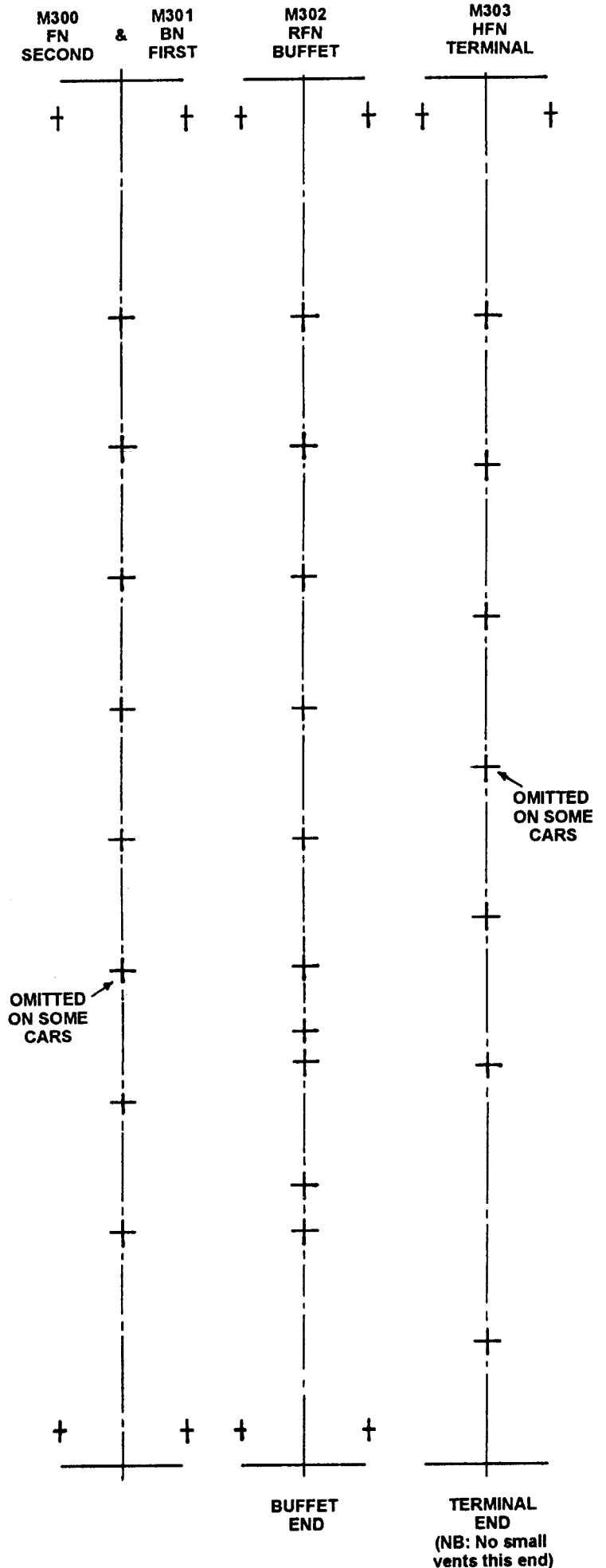
The underfloor details, solebar and corridor connectors should now be painted black. Once this is dry any touching up of the body color can be done.

Your choice of decals can be applied now.

STEP 9 - BOGIES & COUPLINGS

If the Powerline bogies are to be fitted, and the Powerline couplings retained, just fit the wheels to the bogie mouldings and snap the bogies into place.

Diagram 7: Roof vent locations



If KADEE couplings are to be used with the Powerline bogies, then cut off the coupling extension arms on the bogie mouldings before installing the wheels and snapping the bogies to the chassis. The KADEES can then be attached to their mountings by a screw (not included with this kit).

If the multi-piece bogies are to be used, assemble as per the diagram enclosed with the mouldings. Great care must be taken to ensure that the bogie dries square. A moulded pin is used to secure the bogie to the mounting plate.

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INSTRUCTIONS FOR FN\HFN\BN\RFN CARS

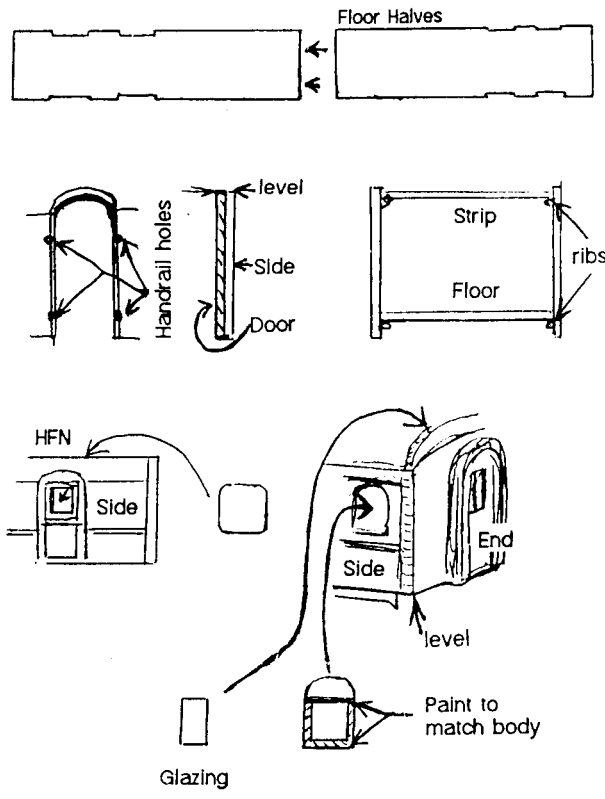
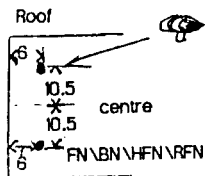
The kits are designed to take Kadee No.8 couplers (not included). Wire or plastic rod will also be required for handrails (0.5mm\0.020"). Assembly of all 4 types is similar, but read the instructions carefully as there are some differences.

BODY

Join the 2 halves of the floor together. Sides - open out holes for the handrails either side of the doorways before fitting the doors. The top of the door should be level with the top of the sides. Fit the sides & ends to the floor - this rests on the ribs on the back of the sides; & the bottom edge of the ends should be level with the bottom of the sides (HFN - ensure that the low end is at the Guard's end of the car). Fit the plain strips on the floor sprues, between the tops of the sides (on the short ribs) to prevent the sides from bowing. If the car is to be air-brushed, it is best to do it at this stage (then fit glazing). If not, the end window glazing should now be put in from the inside; & the guard's door glazing (HFN only) - this is glued on the back of the door; followed by the rest of the glazing which fits from the outside. NOTE that the frame of the window & cross bar needs painting to match the body.

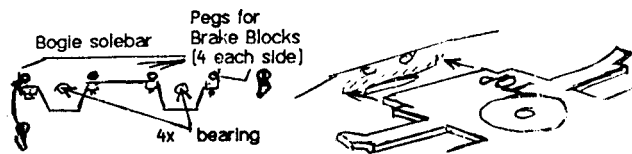
ROOF

Holes need to be made for the ventilators - 2 at each end of FN\BN\RFN, & 2 at the straight end of HFN. The RFN car requires 8 holes for the large ventilators on the roof centre line. With the 'Buffet' side (less windows) facing you, the holes are spaced 37, 8, 21, 5, 11, 53, 22, & 22mm along, starting at the right hand end of the roof. Fit the roof to the body & add the ventilators.



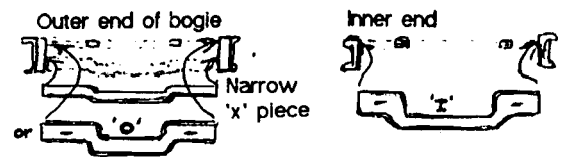
BOGIES

Press the wheel bearings into the backs of the axleboxes. Fit the solebars to the stretcher plate & add the wheels. If Kadee couplers are being used, the narrow cross piece next to the brake blocks on the sprue, should be used for the outer end, or the one marked 'O' if some other system is used. The piece marked 'I' is the inner one. Check that the assembly is square on a length of track & leave to set. Then the centre springs & brake blocks can be fitted (Do not let them touch the wheels).



UNDERFRAME

Fit the halves of the tanks together (square the ends of the mounting 'legs'), and also the dynamo (1 per car) & air cylinder halves. There is a choice of 'buffing' plates. The round ended one is for the guard's end of the HFN and the square ended one for all other types. There is also the small earlier pattern, which, if small radius curves are to be run on, will avoid possible 'locking' of the large plates. Cut off the buffer bodies from the headstocks before fitting if using the small plate. Fit the underframe detail as shown in the sketch.



FITTING BOGIES & STEPS

Fit the bolsters to the floor & use a small amount of solvent to secure the bogie pivot pin. To avoid the bogies hitting the steps, they are not fitted to the body, but instead, on the bogies. Check that the bogies are round the correct way & lay the car on its side. The steps should be fitted under each door with the top step halfway up the bogie solebar. The step separated from the other two by a sprue is for the inner door on the HFN. Finally, bend handrails to shape for doorways; and on the HFN for the rails at the end. HFN only - fit footboards under this, to the bottom of the side solebar (Check that they don't foul bogies).

