

*Australian Railway Kits*

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**Incorporating Main West Models**  
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## **RH05 - NSWGR WHX/NGAX Wheat Hopper**

### **Prototype Information**

During the period 1965-67 the then NSWGR commissioned A.E. Goodwin to build 150 curved sided aluminium grain hopper wagons coded WH. The success of these wagons led to the letting of two further contracts with Tulloch Ltd for a further 218 curved sided aluminium hopper wagons. They differed from the first group of wagons firstly in capacity and secondly by the arrangement of the roof hatches. The roof hatches being grouped with 2 at each end and 3 in the centre. The first 118 wagons were delivered in 1968 - 69 and were numbered 30551 to 30668. The last 100 wagons were delivered in 1971 - 1973 and were numbered 30669 to 30768. Although built to the same specifications the two different groups of wagons differed greatly. This kit represents the 118 wagons delivered from the first contract. Later use of these vehicles has seen them re coded as NGRX for the transport of rice from Leeton to Kellogg's at Botany with one wagon, NGDX 30662G as part of Grain Train 56 with the Weston Milling and FreightCorp logo on the sides.

### **Contents**

This kits contains: 2 X Sides, 2 X Ends, 1 X Roof, 1 X Floor/Hopper Section, 1 X Walkway, 1 X Set of Brake Detail, 1 X Ladder, 2 X Bogies with Blackened Wheel Sets, 1 X Pkt Decals, 1 X Set Discharge Hopper Details, 2 X Kadee #5 Couplers, 2 X Bogie Pins & Alternative Screws, Instruction Sheet.

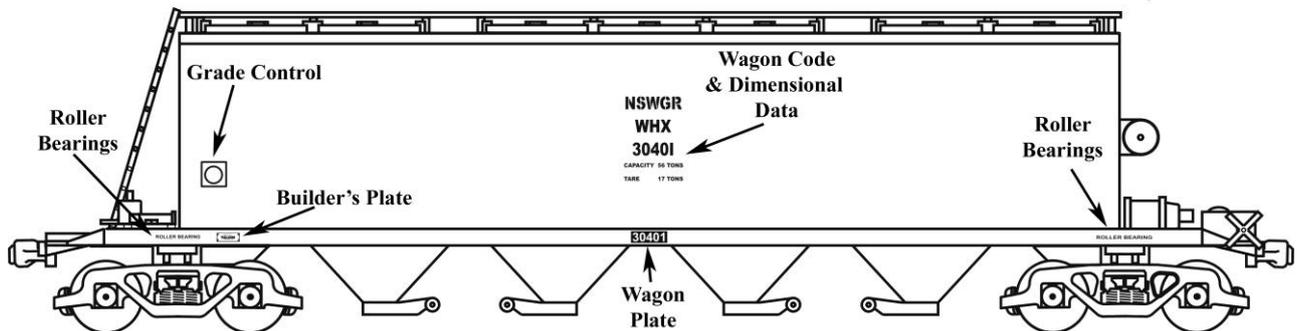
### **Assembly**

1. Check all the components against the contents list and after identification and removal from the sprue separate them into three basic component groups. (1) Barrel, (2) Floor (3) Detailing parts. Now clean up any flash from the mouldings.
2. Liquid cement of the MEK type is preferred and where possible is applied to the inside of the joint with a 0 paint brush to hide any glue over run marks. If unsure dry fit all parts before assembly.
3. Starting with the barrel assemble a side and end to-gether. Next assemble the remaining side and end so that it looks like your first component. Let the joints set for a while whilst your commence other component steps. Next reverse one component and marry it up to the other to form the barrel. Now take the lid and lightly sand or file the draw angle from the sides and ends. Introduce the lid into the barrel from the bottom ensuring that the lids and walkway supports are pointing up through the top of the barrel. Push the lid into the top opening and firstly tack a few spots along one side into position. While the joint is still fresh ensure the top of the lid is flush with the top of the side. When satisfied tack more points along this join. Then slowly ease the lid upward so that the top of the other side of the lid is flush with the top of the other side. Tack into position and then check the position of the roof for flush fitting along the sides and ends. When satisfied cement fully into position from the inside and set aside to allow the joins to cure. The bottom of the sides will bow inwards at this time but do not let that worry you.
4. We can now proceed with the Floor/Hopper Section. Using the sprue in the kit cement sections on the top of the hoppers so that they run parallel with the sides. They should be within the area bounded by the four small barrel locating nipples and in line with the outside of the discharge hopper openings. If you are going to add weight to your model now is the time to do this. Main West Models MWA027 Pourable Lead mixed with 5 minute Araldite and pudged into the discharge hopper cavities with give the wagon a low centre of gravity and better tracking.
5. Starting from one end clip the barrel sides over the sprue runner guides and it should clip home onto the floor. When in position cement the barrel onto the floor. Make sure that the four location nipples are inside the barrel. Set aside and allow to cure. If needed rubber bands can be placed over the ends of the barrel to hold it in position until the join with the floor is cured.

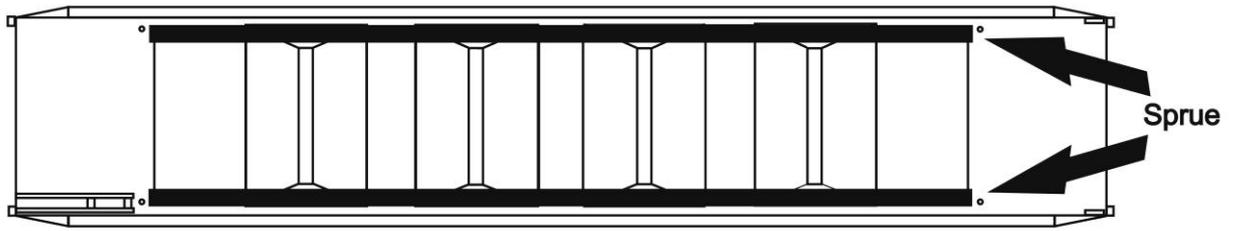
6. The next step is the detailing of the wagon.. Make up the brake cylinder, auxiliary air reservoir, and air reservoir as described in the diagram. Make a jig if you are going to assemble a number of these kits for the placement of the air reservoir. The jig is made of 60 thou plastic per the diagram. Place the jig on the floor of the wagon on the brake cylinder end and against the end of the barrel. Locate the air reservoir in the slot in the jig with the mounting bracket against the end of the barrel and tack cement into place. Remove the jig and cement into place. Locate the auxiliary air reservoir, the brake cylinder and slack adjuster per the diagram and cement in place. To improve the detail of the brake handles first drill a 15 thou hole down the centre of the brake handle spindles. Then on each side of the brake gearbox measure and mark a point 1.4 mm from the bottom and the outer end and drill through the box.. Drill a 15thou hole through the hand brake mounts on each side of the floor and 1.4mm up from the base. Put 15thou wire through one hand brake mount then through the brake gearbox and then through the other hand brake mount. Thread one brake handle over the outer end of the wire and super glue in place. Nip the wire off so that just a couple of thou protrudes to represent the handbrake spindle nut.. Repeat the process for the other side. Slide the hand brake gearbox into position and cement to the floor. Locate the brake cylinder and auxiliary air reservoir and cement in position. Add the roof walkway and cement the ladder in position. Your model is now ready for painting and decaling.

7. Wash your model thoroughly with detergent and water. Rinse and set aside to dry. Paint your model with your favourite aluminium colour. If you are modelling the wagon in early life leave aluminium and use black decals. As the wagons weathered they found the numbers hard to read and changed them to white, sometimes on a black code board in the centre of the wagon. To achieve this effect over spray the model with an uneven coat of mixed black, earth, dark military type green, paint to get the desired effect. You can also use the colour of your choice. Apply the decals per the Decaling Diagram Template and seal onto the surface with a coat of clear mat or satin finish.

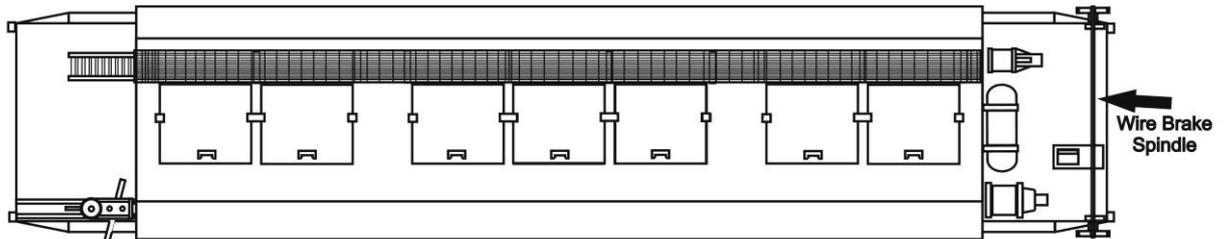
8. To attach the bogies you can either use the bogie pins provided or the screws. The pins are a push interference fit. If you want to use the screws cement the pins in place and when cured drill through the centre with a 1.8mm drill. Work the screw into the hole by screwing in a half turn and them backing off. Clean the thread of the screw as your cut the thread in the plastic. Assemble the Kadee® #5 Coupler and glue in position. Adjust the coupler trip pin height. Your model is now ready for paint and decaling. Paint silver and decal per the instructions.



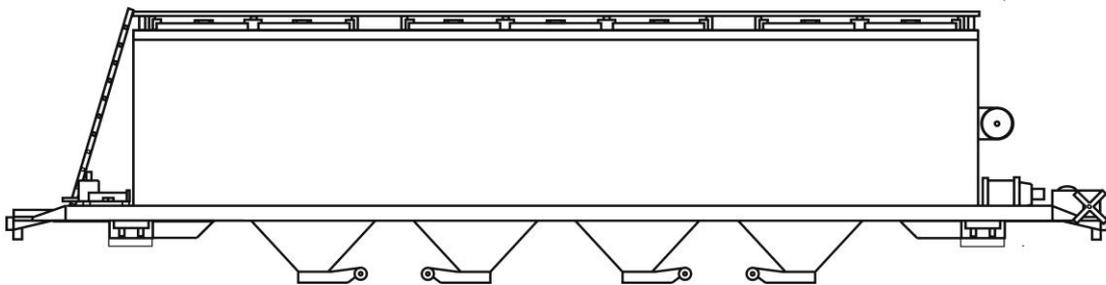
# WHX CONTRACT 1 ASSEMBLY PLAN



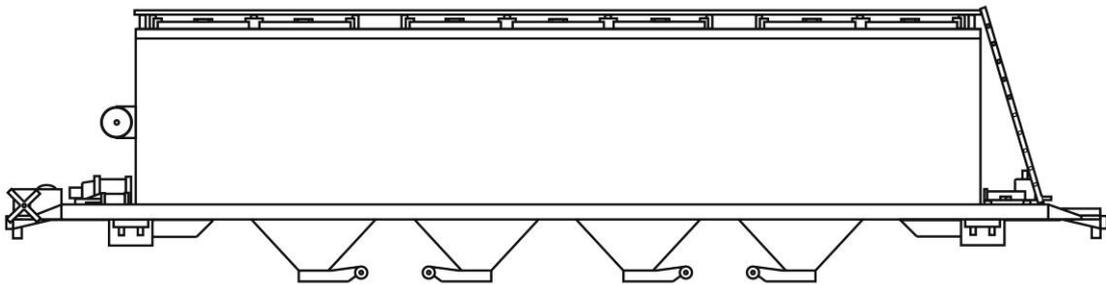
**DIAGRAM 1. Floor Plan**



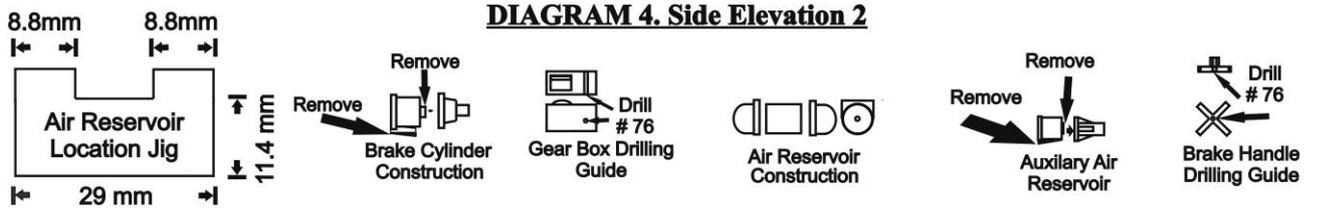
**DIAGRAM 2. Wagon Plan**



**DIAGRAM 3. Side Elevation 1**



**DIAGRAM 4. Side Elevation 2**



**DIAGRAM 5. Jigs & Detail Parts Construction Guide**