

## **1016 - Victorian Railways 6 wheel 'Z' series Guards van.**



Dual coupled ZD19 light grey roof is seen here with ZL473 both 6 wheelers waiting for their next turn of duty at North Melbourne sidings. Photo courtesy of Mel Skinner.

A common sight over the entire Victorian Railways system for over 100 years was the 4 and 6 fixed wheels 'Z' series guards van. Originating in the 1850s and last seeing service in the 1980's they were a familiar sight at the rear of all goods workings and occasional passenger trains. Very little changed in their outside appearance during those years. From 1948 onwards stoves were progressively added and the 2<sup>nd</sup> roof (corrugated iron) above the main roof was removed as they passed through the workshops for major exams. The 1960s saw a strengthening program whereby the centre windows of the cupola were progressively blanked out with structural plates to avoid further cracking in the bodies caused by rough handling on trains and when shunting.

### **The Kit**

The laser-etched/cut kit consists of several parts and these will be identified during construction (**P1**) etc. to aid in assembly. Only minimal tools and basic skills are all that is required to build a very accurate model of this guards van seen throughout the Victorian Railways system. It is suggested that you read the instructions first to become familiar with the components and the essence of construction.

### **Assembly**

Suggested glues are yellow quick drying PVA's. Use a toothpick to apply glue or a SpiritDesign Ultrafine Glue Applicator to the model to minimise glue overuse, wastage and to accurately apply it where you want. **Note:** When needed gently cut each item from the laser etch by cutting through the holding tab with a sharp knife. Clean up all support tabs from etched/cut parts with fine grade sandpaper/file before gluing and always test fit before gluing.

Also, use the photo sequence below as an aid to building the kit

### **Equipment & Materials**

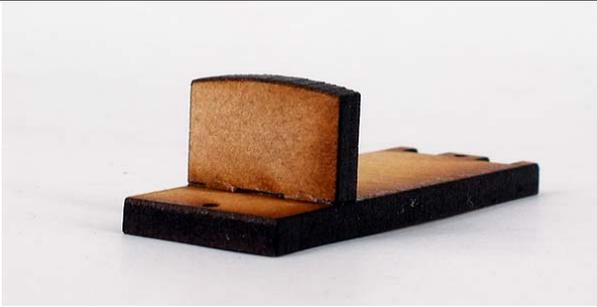
- Sharp hobby knife narrow blade version (or similar), Yellow quick drying PVA glue
- Microscale's Kristal Klear for windows. Fine grade sandpaper 600 or higher, tweezers
- Paints and weathering aids.

### **Instructions**

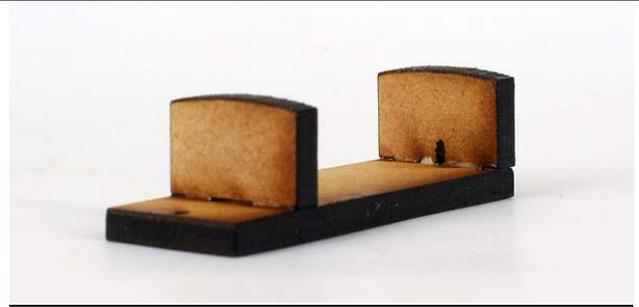
1. Sand the floor (**P1**) edges lightly to remove the slight taper and laser blackening. Don't remove too much; there should be a slight light brown colour rather than the deeper brown colour that was there at the start
2. Glue (**P7**) internal roof support wall to the cupola end where the 2 small square cutouts are located
3. Glue (**P8**) notched internal roof support wall into the cutouts at the end of the MDF base (**P1**). The notch is for coupler screw clearance

4. Glue the side (**P2**) to the floor making sure it is vertical and flush with the ends of the floor. The cupola end section should be opposite the 2 small squares that are about 10mm from the end of the MDF floor (**P1**) and then repeat for the other side (**P4**)
5. Glue the end wall (**P3**) to a side and the floor assembly above making sure that the sides and the end are flush with each other and the end is also vertical
6. Glue the smaller end wall (**P5**) to the partially completed assembly making sure ends are square and vertical
7. Glue cupola inner end (**P6**) into the completed body making sure the window frames line up with the side body frames and the cupola end is straight and vertical. Dab a bit of glue at each of the window frame ends where they meet the cupola ends of the body sides. **Note the scribed line on the cupola inner end support should face towards the long end of the van**
8. Dampen the underside/corrugated side of the roof (**P9**) using water and roll it around a 30 mm diameter rod or container and hold it in position with rubber bands so it takes the curvature. Once dry glue the corrugated side of the roof to the body making sure that there is also glue on the MDF roof supports and run a bead of glue along the side edges at the roofline. The roof can be kept in place using small elastic rubber bands directly above where the MDF supports are under the roof. **Note that the hole on the underside (corrugated scribed side) for the stovepipe is positioned towards the cupola end. The corrugations face inside the guard's van (i.e. cannot be seen)**
9. Repeat the same procedure for the small cupola roof (**P10**)
10. Glue the cupola winglets (**P11**) up against the cupola fame edge on the rear of the cupola
11. Insert the nail (chimney) into the roof hole and test that it's vertical and not leaning. If it is leaning, bend the nail with pliers and reinsert. Once happy glue it in place
12. Glue the van the correct way around onto the underframe after completing the painting section. The brake shoes are on the rear of the wheels, i.e. on the RHS when viewing the model with the cupola on the LHS orientation as per Step and 5 photos

**Basic construction sequence photos as a visual aid.**



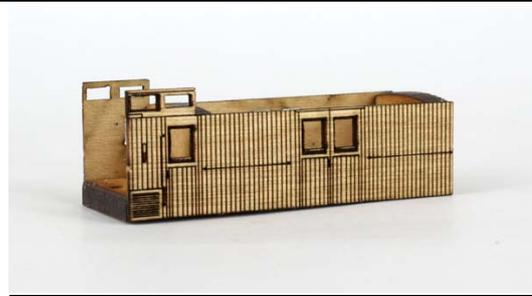
**Step 2**



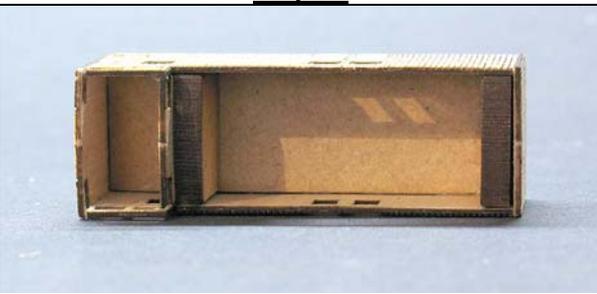
**Step 3**



**Step 4a**



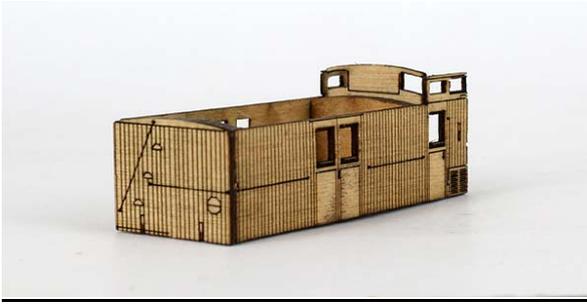
**Step 4b**



**Step 5**



**Step 5**



**Step 6 & 7**



**Steps 8 & 9**



### **3D underframe**

Before inserting the wheels, Graphite power should be twizzled into each of the axle box holes to provide lubrication. DO NOT use any other lubricant, as this is the best and will not harm the 3D printed material. ON one side of the underframe there are small 'V-shaped notches that will allow the remaining wheel on the axle to be inserted into the axle box last. The non-notched side axle box should be inserted first.

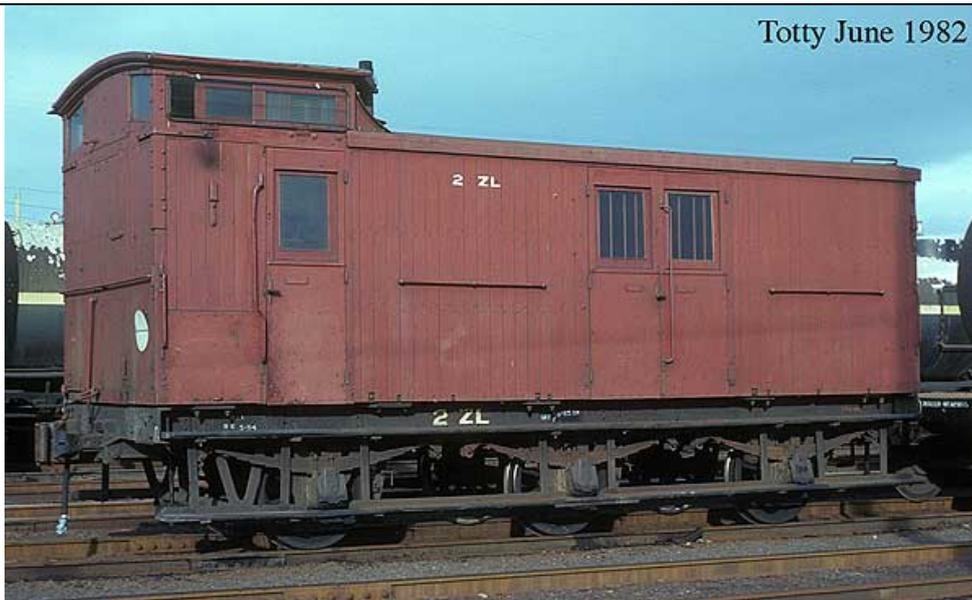
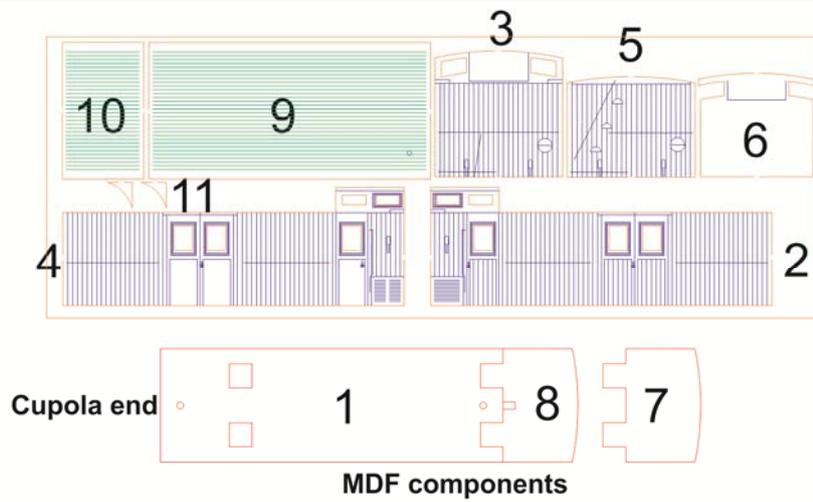
### **Super detailing**

There are lines scribed on the sides of the vans to represent the handrails and can be filled in with a grey lead pencil after painting the van sides. In addition, holes have been provided to allow you to add 3-dimensional handrails above the scribed line area. Lamps could be fashioned out of scraps of styrene if you wish to add more realism.

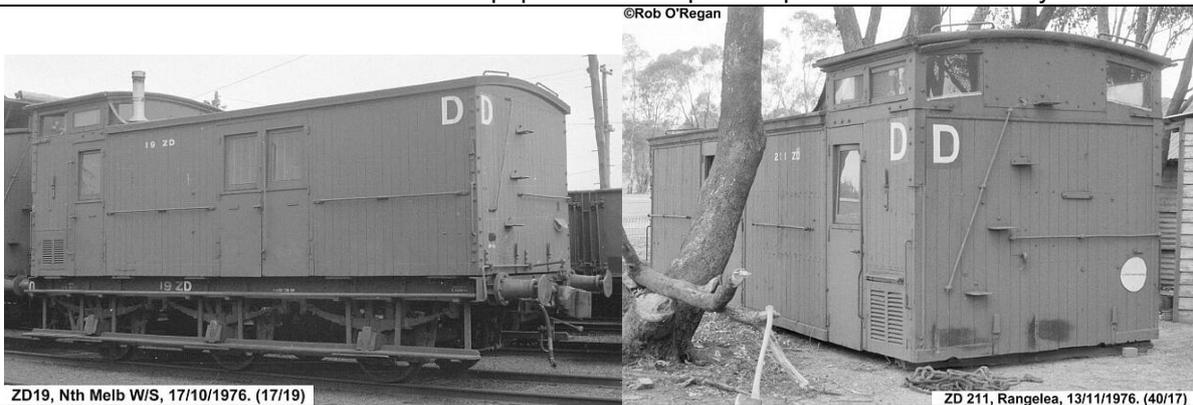
### **Painting and decaling.**

Before painting, lightly sand the roof and its edges to remove any slight furriness with the timber. The vans had a wagon red body (Steam Era wagon Red), Matt Black underframes, a brown roof (Humbrol Matt Dark Earth M29) and Matt white for the tail discs. For those doing the 1960s or early the roofs were light grey. Insert old MicroTrains wheels into the axle boxes when painting the underframe to avoid clogging the axle box holes with paint.

Decals apply decals as per the photos below. The paper set is for the underframe. Seal the decals when dry and weather each guard's van to taste. Use Microscale Krystal Klear for the windows



6 Wheeled no 2 ZL at Tottenham. Underframe paper decals as per this photo. Photo courtesy of Rob O'Reagan.



Note the positioning of large 'D', which is on opposite corners of the van. Photos courtesy Peter Vincent & Rob O'Reagan

**For more information and photos see:**

Rob O'Regan's website <http://www.robx1.net/>  
 Mark Bau's <http://www.victorianrailways.net/>  
 Peter Vincent's <http://www.pjv101.net/indkex.htm>

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