



SDLoco6 - Victorian Railways W class diesel-hydraulic **Requires Dapol Terrier and MT 1015 couplers available separately.**

Thank you for purchasing this kit and I hope you get many hours of enjoyment from it. Chris Pearce (Spirit Design)

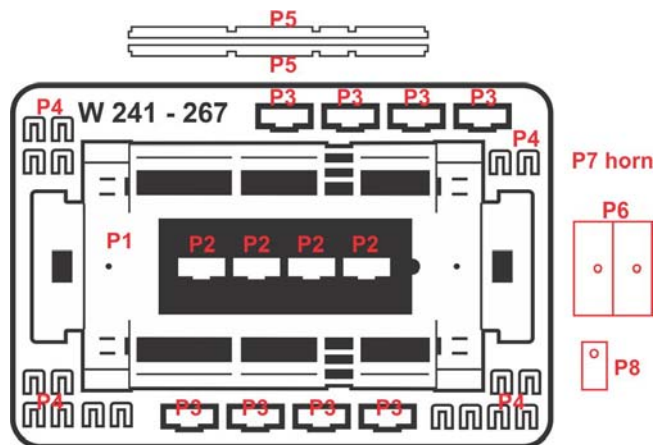


W253 as a yard pilot at Geelong 1978 Photo courtesy of Mark Bau website

Basic history: The Victorian Railways used Clyde/EMD products but in 1958 accepted a tender from Tullocks to supply 25 diesel-hydraulic locomotives to be used for shunting. Originally they were fitted with dual controls but were quickly removed and could occasionally be seen on passenger trains although speed was slow at a maximum of 40mph.

It soon became obvious that the locos were really as reliable as they should be and 10 W's were fitted with GM diesel engines replacing the troublesome Mercedes Benz and Krupp transmission units. These are easily spotted as they had a 2nd exhaust fitted.

They could be seen around Melbourne< Tottenham, Ballarat, Geelong, Seymour and Ararat yards and ran local goods if the need arose. W266 was the demonstrator unit that was used in NSWGR as no 7101 but NSWGR declined to take up any orders. Only one unit got painted into V/Line orange and grey being no 244 and is now assigned to R707 Ops. A few have been preserved as most met the scrapper's torch in 1988.



Soldering: Always clean up soldered joints as you progress, as it's easier in the long run. For an understanding of soldering it would pay to visit the following sites for information on soldering before attempting your first kit.

<http://themodelmakersresource.co.uk/articles/article012.html>

http://www.dccconcepts.com/index_files/DCCsoldering1.htm

I'm not the perfect solderer as I also end up with solder runs but I scrape, file and clean the general area so that it doesn't show as much. It may take a few minutes on some joints but the end finish on your model is worth it!

P27 3D roof bump
P28 Cab marker lights

It is far easier to use the wire brush pictured below in the Dremel to clean parts just before assembly. Holding the unit at a slight angle and lightly letting the brush polish the next item to be soldered works very well. It is the simplest method I have found.

Tools needed: variable temperature soldering iron, solder, flux, small files, very fine sandpaper 600 grit or above, sanding sticks, 'Duck Bill' (flat – no teeth) pliers, fine side-cutting pliers, razor saw, superglue gel, and tweezers.

Other items: Dapol Terrier for the mechanism, paint, Super Glue Gel, modelling putty to fix up uneven soldering and weathering powders.

Assembly Instructions: These instructions may seem long-winded but it's harder to describe and better for your understanding than just putting a few pictures in. Some steps require close attention and they are highlighted ***in bold and italics!*** Any text in Green you can use solder or superglue in the construction. Parts referred to in the text are marked (P1), (P2) etc and there is a coloured picture of the parts to aid you. All brass parts and tabs holding the parts to the etch should be trimmed back and filed smooth after removal. ***Clean parts in the etch with 800-1200 grit sandpaper /emery before soldering a piece into your kit assembly or with a Dremel fitted with a small conical steel brush - see picture below***



Left: Small conical brush for polishing brass etches as needed.
Right: End mill to clear away solder on the underside of underframe

More Reference photos:

<http://www.victorianrailways.net/motive%20power/wdie/wdie.html>
 Train Hobby profile book

Handrails: A note about the handrails. When I did the original 3D print I left holes for the handrails and they are part of the etch. After reviewing the kit with another modeller it was decided to incorporate the handrails in the print as they are so small. Also, the body is supposed to come away from the underframe and it makes it practically impossible to put handrails from the body to the steps unless you solder a wire to the steps and bend the wire into a hole up in the body but don't glue to allow disassembly. I'll leave it up to the modeller to determine if they want this detail.

Assembling the kit:

Underframe:

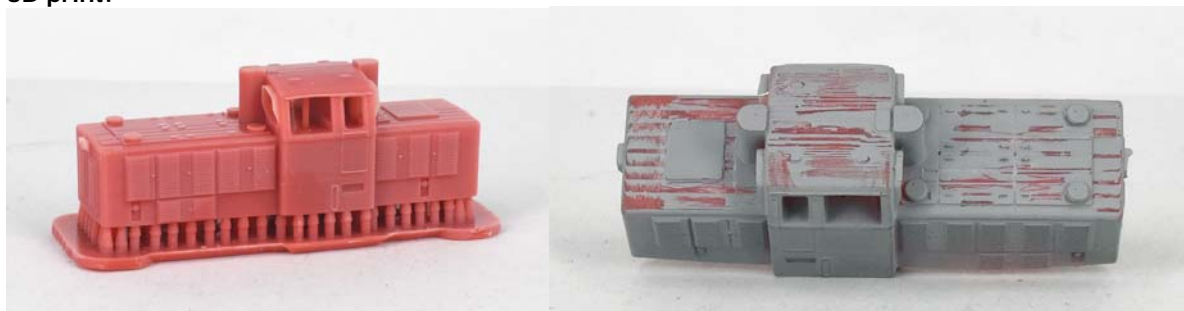
1. Cut the centre section holding the small parts (P2) away from the main walkway etch (P1) and remove the underframe (P1) from the etch brass kit
2. Bend the steps (bottom one) 90 degrees so that the fold is on the inside
3. Bend the headstocks down and solder behind them
4. Bend the staircase down so that the edge is in line with the headstock and repeat for the other 3 staircases
5. This is the hardest part to solder. The inner blanking plate (P2) goes between the staircase and the shunter board sides and a notch is provided. To solder, it's best to support the part and the underframe up against a wooden block. I cut a hole into a block so that the underframe would sit straight when soldering
6. **Glue or solder the stair treads into the staircase**
7. Clean up any excess solder on the completed walkway both on top and underneath
8. Open the couplers holes out to 1.5mm as it makes getting the screws in easier I found out
9. See the underframe painting step now before doing step 9
10. (P5) is glued to underneath of the underframe to thicken it up when looking at the loco side on. Some notches match the shunter step boards and ladder



Rear of loco small hood end where round notch is

Completed underframe with laser cut (P5) in place and painted black

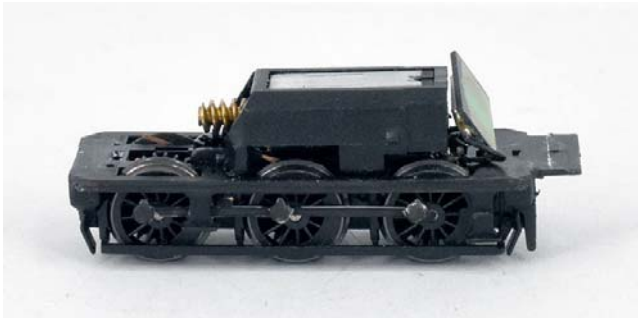
3D print:



3D print (comes in various colours) and sanding the print after priming

11. The body has been left in the support structure to keep its shape. With a fine saw tooth blade saw through the support structure below where it meets the print and then sand the base flat. **Do not** be tempted to just clip the supports as the 3D resin is quite hard but very brittle
12. Glue **(P6)** coupler and body securing blocks into the body with super glue and whilst drying sit it flat on a bench. The holes face closet the grill/door ends of the loco
13. As part of the 3D print process, the slanted/curved body panels and roof have small steps in them. It is suggested that with fine filing sticks dipped in water, gently sand the lines down as this makes the overall appearance better if you have the patience and skills
14. If you are not fitting DCC please add some extra weight to the space provided in the hood ends

Dapol Terrier disassembly:



Donor mech on the picture1 and the altered unit on the right – pictures 2 & 3

DCC? See <https://www.ness-st.co.uk/images/dapol/terrier-dcc-instructions.pdf>

The model is constructed in 2 main halves which separate at the top of the chassis. The separation line is between the tanks and the running board. Most of the chopping of chassis was achieved with small precision plier cutters. If any filing is needed cover the motors area with Tamiya tape to avoid disassembly as it's too finicky. The green circuit board at the rear of the motor is needed for both DC and DCC installations as it's a set of resistors that protect the 9V motor. **Do not discard!** When altering the chassis only remove whats nominated as the rest secures this delicate mech

15. The top half is held in place with 4 clips (which are part of the upper body). Carefully ease the clips whilst pulling on the body and the chassis should separate. Please go easy with this procedure
16. Pull free both couplers, inner coupler sleeves, buffers and clip the air hoses off
17. With the edge of an Exacto knife ease the front LH & RH sides of the wheel splashers located in front of the first set of drivers and discard
18. Using micro side cutters cut through the rear coupler pocket to level with the sandboxes
19. Using a razor saw cut through where the green line is marked and trim associated gear flush with the guard irons underneath
20. Using side cutters cut where the red lines are marked
21. Use a razor saw to cut through the deck and all parts directly below where the blue line is marked. Do not remove the bracket just in front of the guard irons or the sandboxes
22. Test fit the chassis inside the underframe and it sits flat against the underside. You can scrape NOT file the outer edge of the walkway edge that's painted with a razor blade to thin the top lip. If you file you risk getting crumbs inside the motor area
23. The small round lump behind the motor on the underframe of the loco (small hood end) is used to locate into a notch on the brass underframe and allow the chassis to be positioned in the correct spot
24. Mark and drill through the coupler screw hole using the underframe as a template

Chassis, mechanism and body assembly:

24. The underframe holes should line up with the coupler MDF blocks inside the loco body. If not just drill a slightly larger hole in the underframe to compensate and insert the coupler screws partway to make assembly of the couplers further on easier
25. Make sure the underframe sits on the altered mech and if necessary make small alterations deemed ok for a snug fit and mark where the coupler hole goes onto the chassis and drill a hole through large enough so the coupler screw passes through
26. Insert couplers into their holes and insert a Micro Train screw partway into the rear coupler. For the front coupler insert the screw into the **(P8)** chassis locking plate and then through the 1015 coupler. The longer side fits into the remnants of the coupler box of the loco chassis

Painting:

Underframe priming/painting: The whole etch needs to be cleaned before priming and final black colour application. All excess solder should be minimised. There are several ways of cleaning brass but to bathe the brass in warmed Vinegar for 20 minutes is

recommended, then wash with fresh water and then air dry before applying an etch primer. Some people skip the priming stage if they are using water-based acrylics or use a sandblaster. **Return to step 9 of the underframe instructions.**

VR Blue and Gold era: - Steam Era diesel blue: the 3D print and horn. Steam Era diesel yellow: Yellow band around the loco and lights as per prototype photos

V/Line Orange and Grey era: - Steam era V/Line Orange: nose faces, headstocks and cab side to roof gutter. Steam Era V/line Diesel Grey: All other areas. Black: underframe. White: all walkway handrails only

Numberplates and number boards in lights: Depending on your era the numberplate background will be either diesel blue or black, which is the most common. If painting a blue background polish the plate first before coating. Once the paint is applied carefully wipe away the paint on the raised numbers, class letter and border. For black numberplates repeat the steps above. Then lightly paint a round toothpick in a small section with white paint and then gently roll this across the raised sections of the numberplates to paint the detail.

The paper number plates are best trimmed as close as possible to their respective white edges and applied to the loco using Microscale clear water-based topcoats as this acts as a glue as well as allowing you to put a water-based topcoat over an existing enamel or water-based VR Royal Blue

Decals:

The Blue and Gold era chevrons are the highest quality decals on the market. They also feature a unique border fractionally wider than the artwork work. This means you can cut away from the decal and when soaking off, only the artwork with the small clear border will come away. No more having to trim as close as possible as the special mask does this for you. V/Line era: no logos were used.

Glazing:

It is suggested to use Krystal Klear for the windows once all painting and weathering has been completed.



The class leader with the new GM diesel engine. The giveaway is the extra exhaust. Note the different positions of the yellow bands in the photos. Photos courtesy of Mark Bau website



Class leader 241 entering service on the Victorian Railways. Note the extra cowcatcher on the front. VR photo Above finished model