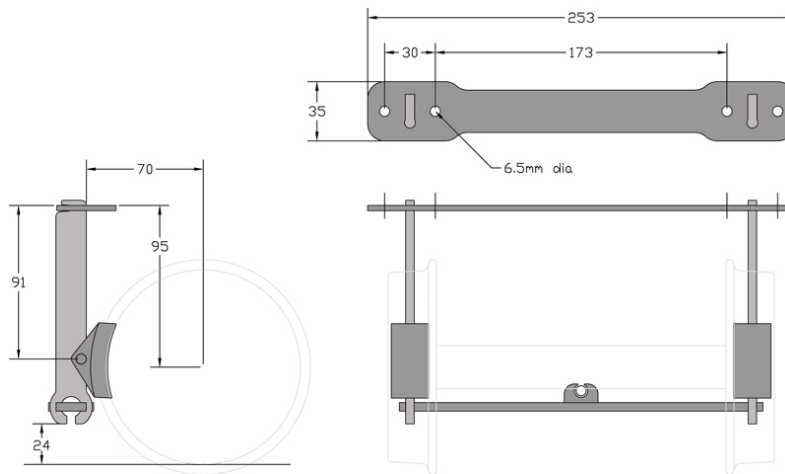


Instructions for assembling universal brake rigging

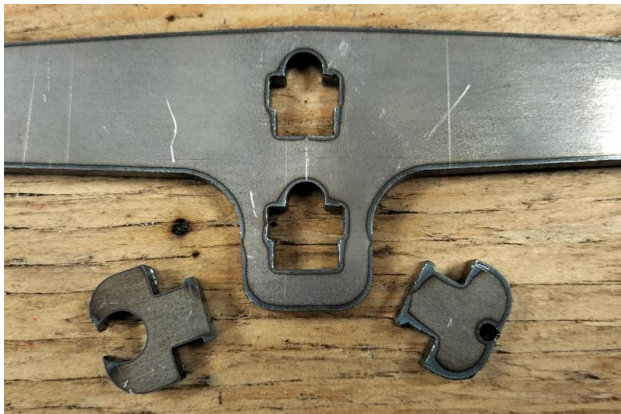
Colin Edmondson January 2023

Before painting the laser cut parts need all the cut edges cleaning up on to remove any black residue, a simple wire brushing is sufficient. Most parts will have a tiny tab where the cutting begins and ends, this isn't normally a problem but occasionally it occurs where two parts will mate together or a bearing is fitted and needs to be filed flush.

The brake rigging should be fitted below the footplate with M6 screws, use nuts as spacers between the crossbar and the footplate or cut away the footplate to clear the tops of the hangers and the locating screws.



The wheels shown in the diagram are 5", it doesn't matter if the brake shoes are not exactly on the centreline of the wheels, 20mm high or low will still work fine.



Twist off the tabbed parts and clean up the rough tabs with a file or a flap wheel in the angle grinder.



> Slot the two cable guides into the holes in the brake beam and retain them with M6 x 16 button screws, form B washers and nyloc nuts.



> Hook each brake hanger into a slot in the top beam with the rounded edge of the brake block on the inner edge and lock it in place with an M6 x 16 button head screw, form B washer and nyloc nut. The two lower 'equalising' beams simply push into place on end and rotate to lock in place.

< Loosely fit the brake cable inner clamp to the brake beam with M6 x 25 screws and nyloc nuts



< Drill a 6mm hole through each PNP brake block. The instructions are on YouTube, search 'PNP brake blocks'.

The blocks have a rounded edge which fits to the flange of the wheel, and a sharp edge which goes to the outside, so make two pairs as shown here. Use M6 x 25 screws and nyloc nuts, tighten them just enough to stop the screw moving while leaving the shoe free to pivot on the hanger.





<The brake rigging is now ready to fit under the footplate using the dimensions given at the beginning to mark the correct position.



The brake cable is routed as shown. The cable outer is cut to length with either an angle grinder or a pair of sharp side cutters. (Don't forget to take the inner out first!). Clean up the end with the grinder so that the inner passes through smoothly.

Shopping list

M6 x 16 button head screw	6 off
M6 x 25 hex head screw	14 off
M6 nyloc nut	20 off
M6 form B washer	20 off
Pack of four 7 1/4" standard gauge brake shoes PNR 1-E	

