Mousa Models - Wheels

Assembly Notes.

It is recommended that a good quality ‘toughened' cyanoacrylate glue is used. Since these tend to be thicker than common cyanoacrylates a looser fit between components has been used.

The printing process can leave a visible surface texture. This is very shallow and can be removed with a glass brush. The use of a glass brush will also provide a key for painting.

The material of the wheels can become electro-statically charged very easily. This means that extra care needs to be taken to remove all dust particles before painting.

The axles and crank pins should be thoroughly degreased before assembly. Spirit based solvents should not be used on the wheel centres as they can raise unwanted textures.

Crank pins are inserted from the back of the wheels. The shoulder should be just proud of the boss surface. If the length of the crank pins needs to be shortened this should be done before they are mounted in the wheels. Use a piece of material such as Plasticard of a suitable thickness with a 2mm hole to hold the crank pin while it is filed to length.

The bolt can be soldered or glued into the crank pins, again they should be reduced to length before mounting in the wheels.

There are three lengths of crank pin used on locos with outside cylinders. Since the wheels have their balance weights in place, care should be taken to ensure that the correct length crank pin is used in each wheel before the crank pins are glued into place.

The driving wheels are self quartering, using a key in the wheels and keyways in the axles. To mount the wheels on to the axle, push an axle fully into the wheel jig. Coat the inside of the wheel bore with adhesive and place the the wheel over the end of the axle and gently rotate it. When the key engages in the keyway the wheel can be pushed onto the axle so that it rests on the top surface of the jig. This is an easy fit and very little force is necessary. It is NOT recommended that the wheels should be taken off the axles once in place. The wheel and axle should be left to set and should be removed from the jig by being pushed out from the bottom of the jig with a thin rod, screwdriver or similar.

Once the adhesive on the first wheels has cured the bearings and gearbox should be assembled on the axle and the second wheel glued in place. A back to back gauge should be used and will set the the second wheel square to the first.

Care is needed in choosing a gearbox as there will be no access to a gear wheel that needs to be glued to the axle. If the final gear needs to be fitted with a force fit, care must be taken that the assembly force is taken by the axle. Excessive axial force on the wheel rims may break the spokes.

The driving wheel axles are slightly shorter than the width of the wheel bosses to allow for a thin (10 thou) cover plate.

The keyways on carrying wheel axles are not indexed so don't expect the wheel spokes to line up. In general the 2mm axles will match the width over bosses of the carrying wheels.

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