



Athearn Hustler Replacement Drive Fitting Instructions for Second Generation Model



The Second Generation model, shown on the left above, is a little harder to convert than the older first Gen model, requiring you to cut out a section out of the cast Mazak frame. To begin, remove the body by popping it off the round lugs on the side of the cast Mazak frame.

The second Gen model is best identified by the brass bearings in the side frame, as indicated by the arrow in Figure 2. It also has the motor mounted using two silicone pads, rather than the single screw of the First Gen model.



Figure 2

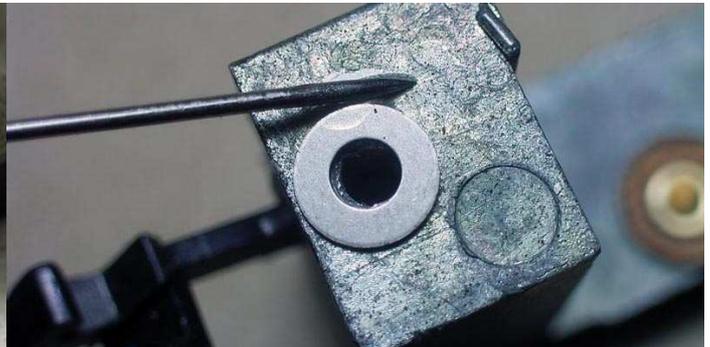


Figure3

The cast frame has two sections electrically isolated from each other by insulating plastic pads, however the new drive has fully insulated power collection that does not rely on the old frame section. Unscrew the two screws in the side ends of the insulated side frame and remove the frame. The wheels should fall out, and can be discarded if you wish, as they are no longer required.

Place one of the small steel washers over the hole in the larger frame section. This washer is required to maintain the correct frame spacing for the new pin-point axles. Align the washer over the hole and, using a pin, place a tiny drop of Superglue on the edge to hold it in place, as shown in Figure 3 above. It is only glued in place to make it easier to re-assemble the side frame, nothing more.

Next, remove the plastic rollers from the larger part of the side frames by gently squeezing the black plastic clips together with pliers. Push the roller supports back through the Mazak frame. Using the end of a small screwdriver, push on the round silicone pads that hold the motor in place until the motor falls out of the frame. Neither the rollers nor the motor are required, so may be discarded if you wish.

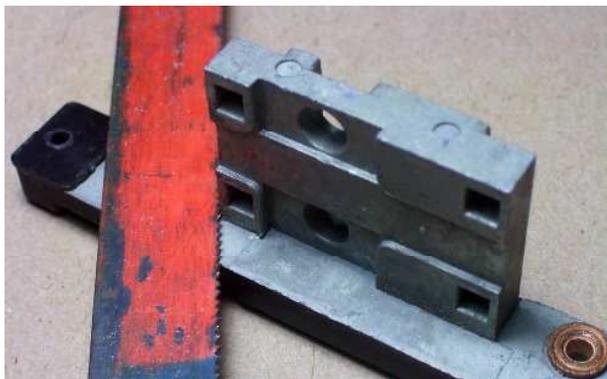


Figure 4

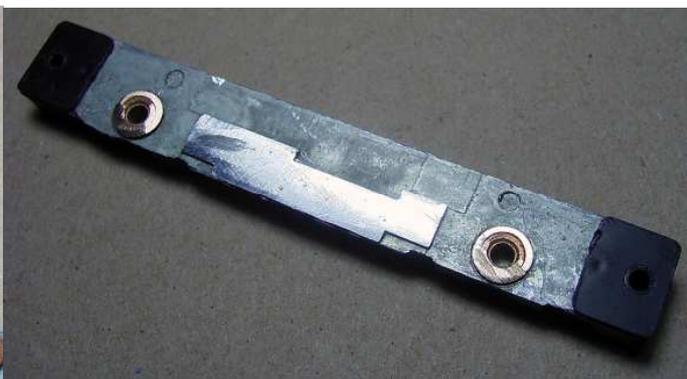


Figure 5

The Second Gen model has a larger motor mount section than the earlier model, and unfortunately it fouls the replacement drive, and must be removed. The section can be removed using a saw or perhaps using a suitable cutting disc in a Dremel. However, if using a Dremel, only use the reinforced cutting discs, never the thin fragile ones, for your own safety. Figure 4 above shows where to cut. Figure 5 shows the side frame after the section has been removed then filed flat. You do not have to do as neat a job as this if you are not inclined to, as it is only necessary to remove the bulk of the motor mount in order to clear the new drive.

Now take the four supplied brass pin-point bearings and place them in the existing brass bearing holes in the side frames. They should fit neatly in place, then place a tiny drop of Superglue on the edges to hold them in place. Again, this is not a structural issue, just a convenient way to keep the bearings in place and stop them falling out while you are assembling the drive. Refer to Figure 6.



Figure 6.

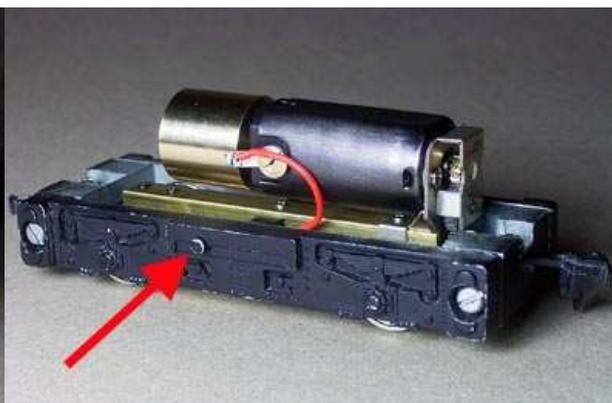


Figure 7.

Place the new Hollywood Foundry drive inside the larger of the two frame sections, with the flywheel section to the rear. The rear of the frames is identified by the round lug that hold the body on, this is offset towards the rear part of the frames, as indicated below by the arrow in Figure 7 above.

Position the pin-point axles in the new pin point bearings installed in the side frame. Place the thinner frame section over the pin-point axles, and screw in place. With the washers between the frame sections, the frames should just firmly hold the drive in place.

Please take care when handling the Hollywood Foundry drive not to bend or deform the phosphor bronze power collection pickups.

DCC Considerations

If you requested your drive 'wired for DCC' then it will come with four wires attached, red and black connected to the power pickups, gray and orange connected to the motor. These colors are the NMRA standard for DCC wiring, and can be connected to the same color wires on your decoder. Any decoder with a 1 Amp capability should be OK to power this drive.

As the motor is fully isolated from the frame, unlike the original Athearn motor, there should be no issues with DCC compatibility.

Lubrication

From time to time, place a small drop of oil on the axles close in to the black Delrin gearbox, also on the end of the small steel shaft supporting the white Delrin gear. A light Teflon bearing grease can be inserted through the square holes on the underside of the black Delrin axle gearboxes.

Noise Reduction

When doing the original conversion, we found that after the body was replaced, it acted a bit like the body of an acoustic guitar, helping to amplify the mechanism noise. This was alleviated by placing thin slips of silicone material between the body and the frame, so we have included some of that material in the kit for you to use.

Simply cut narrow sections from the sheet of supplied silicone, about half an inch long, and place them on the underside of the body where it rests on the chassis. Use a smear of Superglue to hold the strips in place

Additionally, adding plasticine to the inside parts of the body can also help dampen the noise.