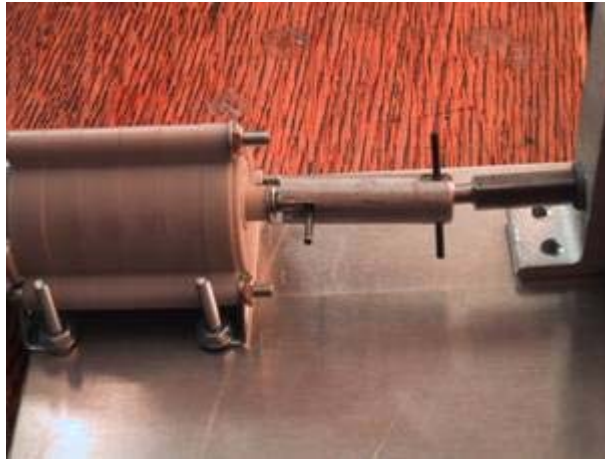


Shaft Coupling Process Plans



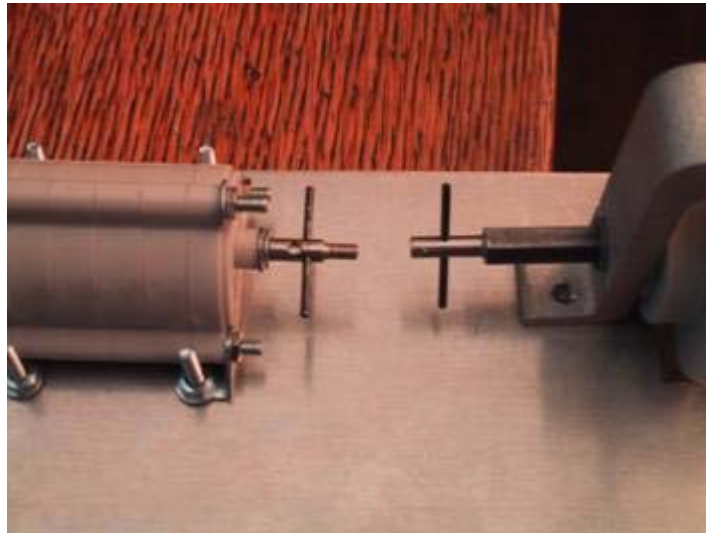
You will need to include this shaft coupling in your design to allow for angular and linear misalignment of the input and output shafts. It is also useful to prevent the transmission of radial and axial load from the output to the motor shaft. Remember - the motor does NOT work well as a bearing. If you do not use a shaft coupling between the motor and output, magic gear pixie dust will come out of you gear box and it will cease to function! This coupling is very useful for the right angle gearbox*.

Building the Coupler



1. Cut a 1" length of 3/8" aluminum rod.
2. On the lathe, drill a 3/16" hole all the way through the rod.
3. Collet the piece vertically in the mill, and use a 1/8" end-mill to create the slots in each end. Mill slots 1/4" into each end. Be sure to mill the slots 90 offset from each other.

Pins



The coupler is to be placed over the ends of a shaft with a diameter of approximately 1/8" ends. To accept the coupler, the ends of the shafts must be fitted with pins to engage the slots in the coupler.

Motor

For the output shaft for the Tamiya motor kit, force a 2mm spring pin through the hole in the motor shaft.



Output Shaft

1. Turn down a 1/2" length of the hex shaft to 1/8" diameter.
2. Use a file to make a flat on one side of the 1/8" diameter shaft end, approx 1/4" in from the end.
3. Mark a spot for the hole on the flat, 1/4" in from the end of the shaft.
4. Center drill the hole, taking care to not let the center drill "walk" off of the shaft. Use a mill if you are unable to do this with a drill press.
5. Drill a 1/16" hole in the shaft.
6. Push a 1/16" spring pin through the shaft.

