

Transferring the wound motor to the model and the use O-Rings

Once the motor is wound at least one end must be transferred to the model. If the motor is wound completely off the model it will first be attached to the propeller shaft. Have the model within easy reach of where you are winding or have someone available to help.

Pinch the motor about half a centimeter from the winder and slip the motor off the winder. The half centimeter will quickly unwind to create a small loop. Hold the model by its propeller and shaft to attach the loop to the propeller shaft. Gently release the motor to allow the propeller shaft to accept the torque.

Once this is done, while still holding the propeller and propeller shaft, pinch the motor again about a half a centimeter from the stooge hook. Remove it from the hook as you did from the winder.

Attach the motor to the tail hook. Again, gently release the motor to allow the motor stick to accept the torque. If you are working with a partner one person can hold the model while the other transfers the motor.

When removing the motor from the winder or stooge it is a good to have a pair of tweezers, a piece of wire or a straightened paperclip available. If the loop of the motor slips between your finger and thumb you can use the wire or tweezers to retrieve it. This will prevent you from having to rewind the motor.

Small plastic rings can be placed on the motor before it is tied to minimize the turns lost transferring the motor to the model. These can be true O-rings, rings made from plastic tubing or other purchased rings.

True O-rings are made in a number of materials and sizes. If O-rings are to be used rubber or Buna-N is a commonly available and recommended material. The O-rings need to be as small as practical to not add excess weight to the model.

Rings can be made from plastic tubing like ball point pen cartridges and cotton swab handles. The ring needs to be large enough to accept the rubber motor and have clearance to be placed on the winder or stooge hook. The size of the motor that goes through the ring will decrease as the motor is wound so a tight fit is not necessarily bad.

Instead of trying to force a large piece of rubber motor through the hole in a small ring, get a 2" to 4" long piece of thin wire and bend it in the middle. Push the bent end through the ring. Open the wire and insert the rubber through the wire loop. Pull the wire and the rubber through the hole in the ring. After you have placed the rings on the rubber tie the knots to make the motor.

The purpose of using rings is to try to minimize the loss of turns in the motor when it is transferred from the winder and stooge. Pinching a length of the wound motor to make the attaching loop loses turns. The rings will not store energy like the rubber and they add mass. If the rules limit the mass of the motor it is worth experimenting to determine if the additional weight of the rings is justified by the turns they can save.