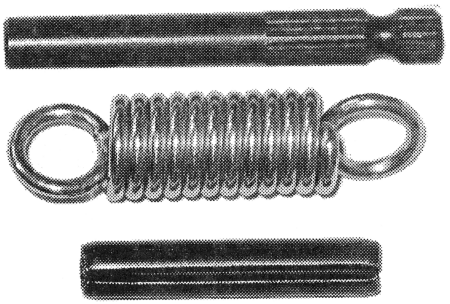
CARRIAGE SPRING REPLACEMENT



RY85 CARRIAGE SPRING KIT

CARRIAGE SPRING REPLACEMENT

Turn the machine over on a piece of thick carpet (you don't want to damage the power switch located on top of the machine). Use your 3/16" Allen Hex Wrench and remove the 1/4-20 X 3/4" long cap screw that secured the linkage to the "stick-shift" lever's drive shaft. Drop the linkage assembly and pull out the "stick—shift" lever and drive shaft assembly. Leave the two piece linkage assembly attached to the carriage shaft.

If your carriage spring is still attached — grab the linkages with your left hand and use them as a lever to hold the carriage shaft from turning when you release the carriage. With your right hand release the carriage in the same way you would do it if you were going to cut a key. This will require a bit of muscle in your left hand because you're trying to hold onto the linkages while trying to release the carriage at the same time.

When you've released the carriage you will notice that everything got easy all of a sudden and the carriage spring will probably fall out by itself. At the bottom of the carriage there is a 1/4" wide slot with a pin in it — use a small hammer and drive the pin to nearly flush with the bottom of the carriage.

From the front of the carriage install a new carriage spring and retaining pin — the retaining pin will lay in a milled groove on the face of the carriage. Hold the spring and its pin in place and manipulate the other end of the carriage spring onto the 1/4" diameter grooved pin going through the carriage shaft. If the spring won't reach to the pin when you have your carriage in the locked back position — release the carriage and manipulate the carriage and carriage shaft (hold onto the linkages like you did before when you released the carriage) until the end of the carriage spring can be fitted over the 1/4" diameter groove pin.

Now holding the linkages attached to the carriage shaft with your left hand and at the same time holding the carriage spring and retaining pin in place with your right hand — cock the carriage back to its locked back position. Once again you will need some muscle power to hold onto the linkages attached to the carriage shaft to keep the shaft from turning. Once the carriage is in the locked back position everything gets easy again.

Reinstall the "stick—shift" and drive shaft assembly and reattach the two piece drive shaft linkage and you're almost done.

Turn the machine back onto its feet and observe the carriage spring attached to the 1/4" diameter grooved pin driven into the carriage shaft. Take your small hammer and a steel rod or drift and drive the pin back into the carriage shaft. Stop when the bottom edge of the carriage spring almost touches the carriage shaft.

Test the operation of the carriage and the "feel" of the carriage spring. If the carriage spring seems a bit to strong — drive the grooved spring retaining pin in a little bit further. If the carriage spring seems a bit to weak — drive the grooved spring retaining pin up (from the bottom of the machine) a little bit further. Test the carriage again.

If further assistance is necessary please call NAT'L **(800) 447-9826** or CA **(800) 841-3919.**