



CAPACITOR AND SPRING

Fig. 27

The illustration shows the spring and capacitor. The capacitor should be positioned with its terminals pointing downwards. When fitting the spring to the capacitor, insert the capacitor at the widest end of the spring and push it down until the small coil locates in the groove on the capacitor body.

87. Storage Life of Model 2MC Capacitor

The life of the 2MC is very much affected by storage in high temperatures. The higher the temperature the shorter its shelf life. At normal temperature i.e. 20°C. (68°F.) it will have a shelf life of about 18 months. At 40°C. (86°F.) about 9 to 12 months. Therefore, storing in a cool place will maintain their efficiency.

88. Testing

The efficiency of a stored capacitor can be determined fairly accurately with the aid of a voltmeter (scale 0–12 volts) connected to the terminals of a charged capacitor and the instantaneous reading on the meter noted. The procedure is as follows:—

(1) Connect the capacitor to a 12 volt supply and leave connected for 5 minutes. Observe carefully the polarity of connections, otherwise the capacitor may be ruined.

(2) When charging time has been completed, disconnect the supply leads and allow the charged capacitor to stand for at least 5 minutes.

(3) Then connect the voltmeter leads to the capacitor and note the instantaneous reading. This should not be less than 8.0 volts for a serviceable unit.

If a voltmeter is not available a rough check can be made by following the procedures in (1) and (2) and using a single strand of copper wire instead of the voltmeter to short-circuit the capacitor terminals. A good spark will be obtained from a serviceable capacitor at the instant the terminals are shorted together.

89. Wiring and Installation

The capacitor is fitted into the spring and is mounted with its terminals downwards. The capacitor negative terminal and Zener diode is connected to the rectifier centre (D.C.) terminal (brown/white), and the positive terminal must be connected to the centre bolt earthing terminal (see capacitor ignition terminal on diagram).

90. Service Notes

Before running a 2MC equipped machine with the battery disconnected it is essential that the *battery negative lead be insulated* to prevent it from re-connecting and shorting to earth (frame of machine). Otherwise, the capacitor will be ruined. This can be done by removing the fuse from its holder and replacing it with a length of $\frac{1}{4}$ in. dia. dowel rod or other insulating medium.

A faulty capacitor may not be apparent when used with a battery system. To prevent any inconvenience arising, periodically check that the capacitor is serviceable by disconnecting the battery to see if the machine will continue to run in the normal manner, with full lighting also available.