

## Appendix #4 - Basic Electrical Tests for Multiple Coils

### Connections/ Ohm Readings

A-B:  $\infty \Omega$  (w/points open)

A-C:  $0 \Omega$

A-E:  $0.295 \Omega$  (w/points closed)

B-E:  $0.295 \Omega$

C-D:  $3300 \Omega$

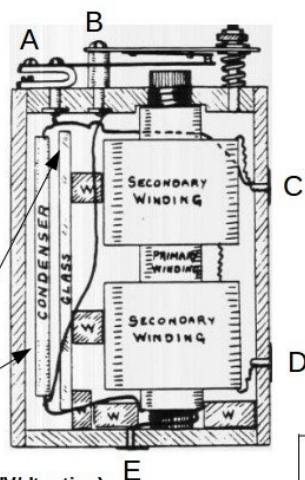
Note: Connections at A and B are sometimes reversed (more common on K-W coils).

### Condenser

$0.40-0.45 \mu F$

replacement capacitor spec:

$0.47 \mu F$ ,  $>400VDC$ ,  $>600V/\mu sec$  (dV/dt rating)

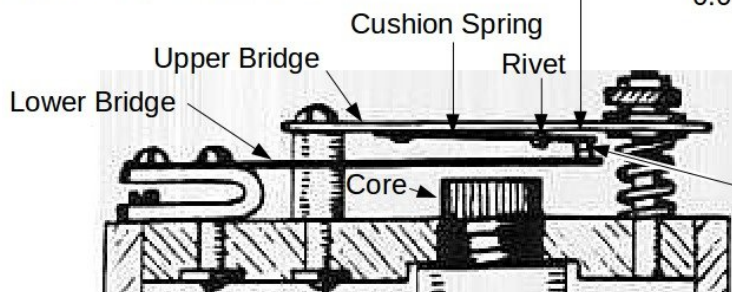


### Problem Causes - Symptoms

- **Condenser Open** – heavy blue arc on points but no spark (A-B  $\infty \Omega$  w/ points open)
- **Condenser Shorted** – no arc on points, no spark and irregular current draw (A-B  $0 \Omega$  w/ points open)
- **Secondary Coil Open** – points vibrate and no spark (C-D  $\infty \Omega$ )
- **Secondary Coil Shorted** – points vibrate but irregular spark (C-D  $0 \Omega$ )
- **Primary Coil Shorted** – points don't vibrate and irregular current draw (B-E  $0 \Omega$ )
- **Primary Coil Open** – points don't vibrate, no current draw and points are clean/adjusted (B-E  $\infty \Omega$ )

### Cushion Spring Gap:

(cushion spring touching rivet head with very light pressure, make all four coils the same gap)  
 $0.003-0.005"$



### Point Gap:

$1/32"$  or  $0.029-0.031"$   
(with lower bridge pulled down to core)

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(Figure above [drawn by John Carter.](#))

### Test results:

Coil #	A-B (w/Points open)	A-C	A-E (w/Points closed)	B-E	C-D	Point Gap	Cushion Gap	Condenser	Current Draw
Nominal	$\infty \Omega$	$0 \Omega$	$0.3 \Omega$	$0.3 \Omega$	$3300 \Omega$ (Ford) $2100 \Omega$ (some KW)	$1/32"$	$0.005"$	$.47 \mu F$ <small>If can't measure replace with new.</small>	1.3 A
	$\Omega$	$\Omega$	$\Omega$	$\Omega$	$\Omega$	"	"	$\mu F$	A
	$\Omega$	$\Omega$	$\Omega$	$\Omega$	$\Omega$	"	"	$\mu F$	A
	$\Omega$	$\Omega$	$\Omega$	$\Omega$	$\Omega$	"	"	$\mu F$	A
	$\Omega$	$\Omega$	$\Omega$	$\Omega$	$\Omega$	"	"	$\mu F$	A
	$\Omega$	$\Omega$	$\Omega$	$\Omega$	$\Omega$	"	"	$\mu F$	A
	$\Omega$	$\Omega$	$\Omega$	$\Omega$	$\Omega$	"	"	$\mu F$	A
	$\Omega$	$\Omega$	$\Omega$	$\Omega$	$\Omega$	"	"	$\mu F$	A
	$\Omega$	$\Omega$	$\Omega$	$\Omega$	$\Omega$	"	"	$\mu F$	A
	$\Omega$	$\Omega$	$\Omega$	$\Omega$	$\Omega$	"	"	$\mu F$	A
	$\Omega$	$\Omega$	$\Omega$	$\Omega$	$\Omega$	"	"	$\mu F$	A