

# Notes on Electrolock Switches

- Supplied by John Stokes, W.O.K.R. # 659

Page 1 - [Theory of Operation \(Type 9A, No Gas Gauge\)](#)

Page 2 - [Troubleshooting \(Type 9A, No Gas Gauge\)](#)

Page 3 - [Theory of Operation \(Type 9B, With Gas Gauge\)](#)

- [Troubleshooting \(Type 9B, With Gas Gauge\)](#)

Page 4 - [Detailed Lock and Distributor Views](#)

Page 5 - [Exploded View \(Distributor End\)](#)

## 1929 "Thief-Proof" Lock Ignition Switches

"ELECTROLOCK", TYPES "9-A" AND "9-B"

SHALER LOCK WITH "FUSIBLE GROUNDING LINK"

1929 "Electrolocks"

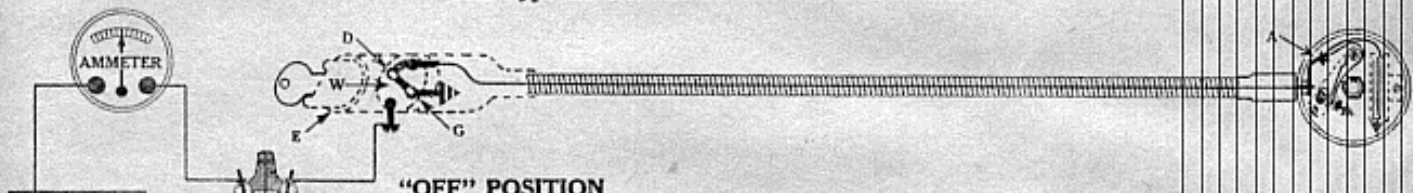
The types "9-A" and "9-B" Electrolocks, developed for 1929 automobiles, are very similar in action to the types "A" and "B" used in 1928, and described on pages 17 and 18 of this section. The method of switching is somewhat different, however, the action now being a turning movement instead of the in and out motion used in 1928. Rights to manufacture have been purchased by the Delco-Remy Corp., and on many of the 1929 productions a Delco-Remy parts number is listed.

### THEORY OF OPERATION

The "Electrolock" is an ignition switch and lock, so constructed that shutting off ignition automatically locks the car. When in the locked position, the ignition circuit not only is "opened" but at the same time the insulated breaker point is grounded, making it impossible to wire around the ignition switch by use of "jump" wires. The wire from ignition switch to distributor is enclosed in a heavy steel armored cable, the cable being attached to the distributor in such a way that it is very difficult to remove. (For detailed instructions on how to remove cable from 1929 Chevrolet Distributor, see P. 27 of this section.) "Electrolocks" are made in four forms, types "A" and "9-A"; "B" and "9-B", all forms being very similar in action. Types "B" and "9-B" are used when car is equipped with gasoline gauges, etc., which should only be "alive" when ignition is "ON". Types "A" and "9-A" have but one terminal, while types "B" and "9-B" have three.

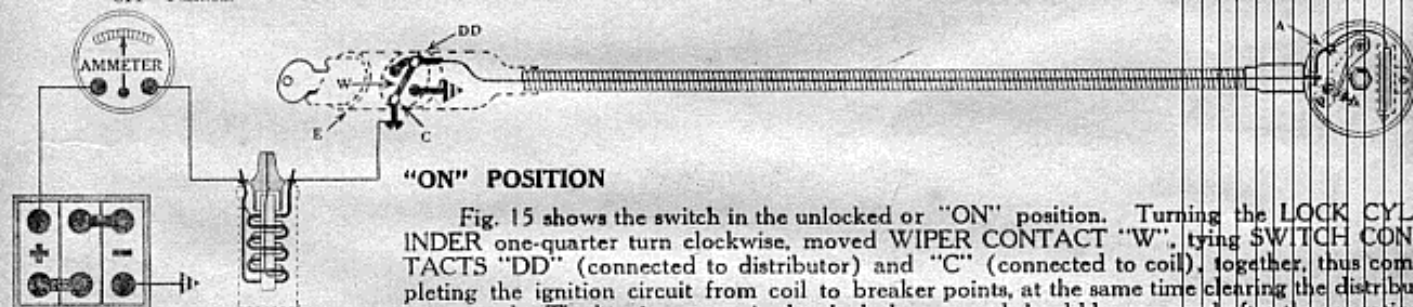
### OPERATION — TYPE "9-A"

This Type has but one Terminal on Side of Case



"OFF" POSITION

Fig. 14 shows type "9-A" in the locked or "OFF" position. Turning the LOCK CYLINDER moved WIPER CONTACT "W", tying SWITCH CONTACTS "D" (connected to distributor) and "G" (connected to ground) together, thus grounding the distributor, at the same time breaking the ignition circuit.



"ON" POSITION

Fig. 15 shows the switch in the unlocked or "ON" position. Turning the LOCK CYLINDER one-quarter turn clockwise, moved WIPER CONTACT "W", tying SWITCH CONTACTS "DD" (connected to distributor) and "C" (connected to coil), together, thus completing the ignition circuit from coil to breaker points, at the same time clearing the distributor ground. The key is not required to lock the car, and should be removed after the operation of unlocking is completed.

FIG. 14.  
Type 9-A "Electrolock" in Locked or "OFF" Position.

FIG. 15.  
Type 9-A "Electrolock" in Unlocked or "ON" Position.

## TROUBLE SHOOTING ON TYPE "9-A" ELECTROLOCK

Should ignition trouble develop, to ascertain if it exists in the "Electrolock" the following tests should be made, by using six volt battery with a 21 C.P. test light in series with TEST POINTS. In making tests the breaker points should be open.

1. Remove wire from terminal on side of switch. Tape end of wire, as it is "alive" at all times.

2. Remove distributor cap and open breaker points, either by hand cranking engine until arm is opened by cam, or by inserting paper between contact points. (In case of high speed double breakers it is recommended that paper be used.)

3. Place one TEST POINT on the primary terminal inside the distributor ("A", Fig. 14), and the other TEST POINT on the LOCK TERMINAL. With the switch unlocked, the lamp should burn. With the switch locked, the lamp should not burn.

4. Place one TEST POINT on the primary terminal inside the distributor ("A", Fig. 14) and the other TEST POINT on the LOCK CASING ("E", Fig. 14). With the switch locked, the lamp should burn. With the switch unlocked the lamp should not burn. If the lamp burns either there is a ground in the "Electrolock" or the distributor condenser is shorted or grounded. It will be necessary to disconnect condenser from distributor to determine whether the trouble is in the "Electrolock" or condenser.

If the above tests show up satisfactorily, and there is still ignition trouble evident, this ignition trouble must be located elsewhere in the ignition circuit.

Should the above test indicate some trouble in the "Electrolock" switch, the lock should then be removed from the mounting. The LOCK CYLINDER can be removed by turning to the unlocked position and removing the small screw in the side of the LOCK CASING near the end. After the LOCK CYLINDER is removed, any trouble due to broken parts will then be readily discovered. The necessary parts for repairs can be obtained through the car dealer or service stations.

In order to make distributor repairs which cannot be accomplished on the car, the lock can be unlocked, removed from the mounting, and the distributor taken to the bench with the lock and cable attached.

Should the LOCK CYLINDER not work freely on account of dirt or foreign matter getting into the lock case, the cylinder should be removed and cleaned off so that it will work freely.

Never put grease or oil in LOCK CYLINDER; if tumblers seem to stick, use graphite.

Replacement keys may be obtained from the service stations.

All wire terminals should be insulated down to screw head, so as to eliminate possibility of shorting by touching one another or nearby metal parts.

The new "Electrolocks" are provided with a serviceable timer end which permits the removal of the SNAP TERMINAL ASSEMBLY from the "Electrolock" without destroying the "Electrolock".

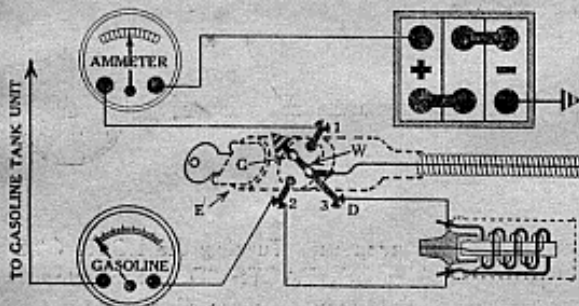
In order to remove the SNAP TERMINAL ASSEMBLY from "Electrolock", first remove the SNAP TERMINAL ASSEMBLY from the distributor, cut the terminal post to remove GROUNDING CUP and INSULATING WASHER, then unscrew the TIMER END NUT, which is staked in. This will permit the removal of the SNAP TERMINAL ASSEMBLY with the TIMER END LOCK RING attached.

The TIMER END CONTACT SPRING ASSEMBLY, which is fastened to the current-carrying wire, is also serviceable. A tool with a hooked end may be used to remove this assembly.

When replacing the TIMER END CONTACT SPRING ASSEMBLY, insert in timer end and push in as far as possible, then insert the TIMER END LOCK RING, the TIMER END INSULATING WASHER, and then fasten these in with the TIMER END NUT. Be sure to stake in the TIMER END NUT so that it will not loosen in use.

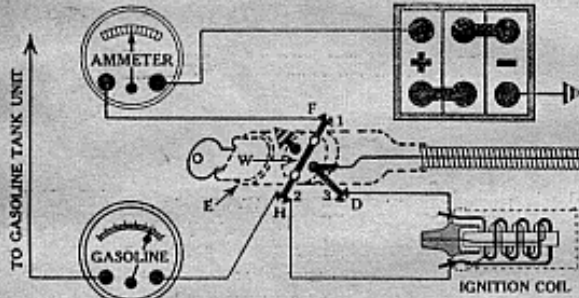
## OPERATION — TYPE "9-B"

This Type Has Three Terminals on Side of Case



### "OFF" POSITION

Fig. 16 shows type "9-B" in locked or "OFF" position. Turning the LOCK CYLINDER moved WIPER CONTACT "W", tying SWITCH CONTACTS "D" (connected to distributor) and "G" (connected to ground), together, thus grounding the insulated breaker point, at the same time breaking the ignition circuit.



### "ON" POSITION

Fig. 17 shows the switch in the unlocked or "ON" position. Turning the LOCK CYLINDER one-quarter turn clockwise, moved WIPER CONTACT "W", tying SWITCH CONTACT "F" (connected to ammeter) to SWITCH CONTACT "H" (connected to both gasoline gauge and ignition coil), together, thus completing the ignition circuit thru the ignition coil, thence back to SWITCH CONTACT "D" which, in turn, is connected to the insulated breaker point. The operation, of course, cleared the distributor ground, and at the same time completed the gasoline gauge circuit.

## TROUBLE SHOOTING ON TYPE "9-B" ELECTROLOCK

Should ignition trouble develop, to ascertain if it exists in the "Electrolock", the following tests should be made, by using a six volt battery with a 21 C.P. test light in series with TEST POINTS. In making tests the breaker points should be open.

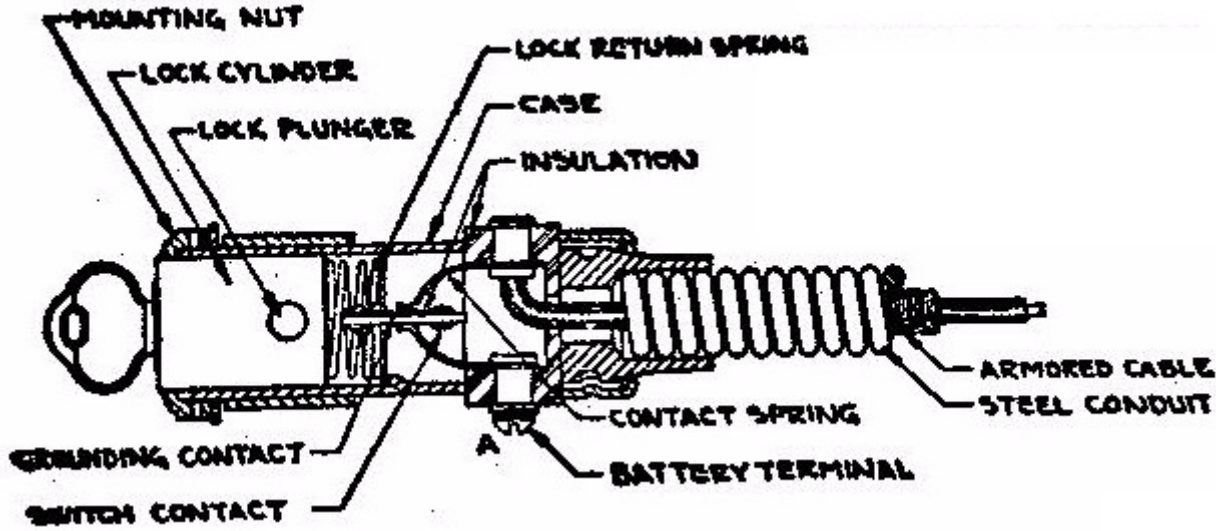
1. Remove all wires from terminals on LOCK CASE. Tape end of wire taken from terminal (#1, Fig. 17), as it is "alive" at all times.
2. Remove distributor cap and open breaker points, either by hand cranking engine until arm is opened by cam, or by inserting paper between contact points. (In case of high speed double breakers it is recommended that paper be used.)
3. Place one TEST POINT on the primary terminal inside the distributor ("A", Fig. 17), and the other TEST POINT on the LOCK HOUSING ("E", Fig. 17) or wire conduit. With the switch locked the lamp should burn. With the switch unlocked the lamp should not burn.
4. Place one TEST POINT on the terminal marked "Coil" (Terminal #3, Fig. 17), and the other TEST POINT on the LOCK CASING ("E", Fig. 17). With the switch locked, the lamp should burn. With the switch unlocked the lamp should not burn. If the lamp burns, either there is a ground in the "Electrolock" or the distributor condenser is shorted or grounded. It will be necessary to disconnect condenser from distributor to determine whether the trouble is in the "Electrolock" or condenser.

If the above tests show up satisfactorily, and there is still ignition trouble evident, this ignition trouble must be located elsewhere in the ignition circuit.

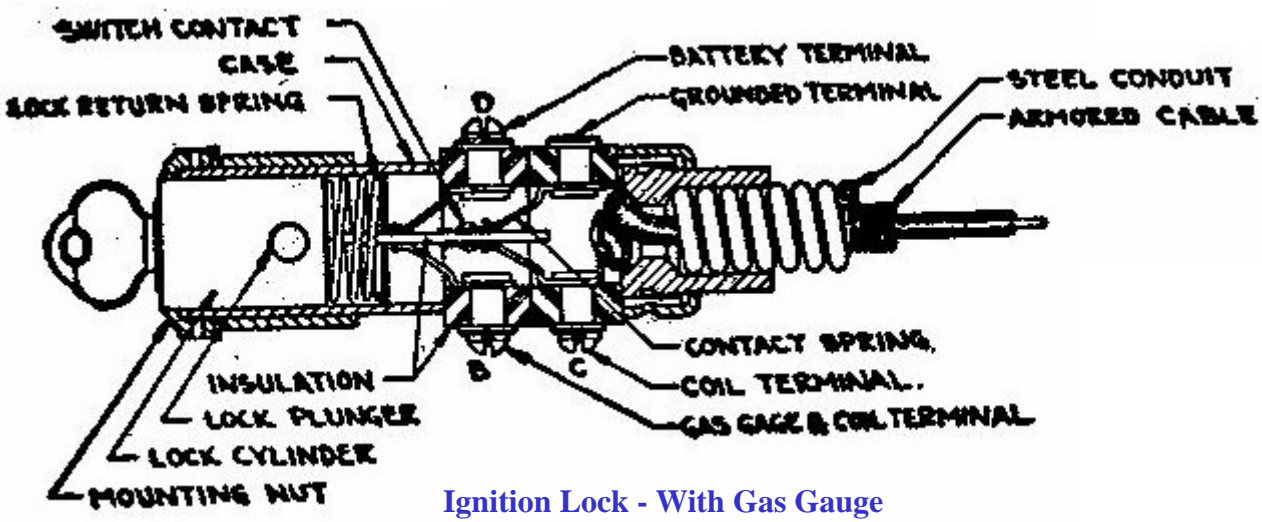
Should the above test indicate some trouble in the "Electrolock" switch, the lock should then be removed. Follow same instructions as for "Electrolock", type "9-A".

FIG. 16.  
Type 9-B "Electrolock" in Locked or "OFF" Position.

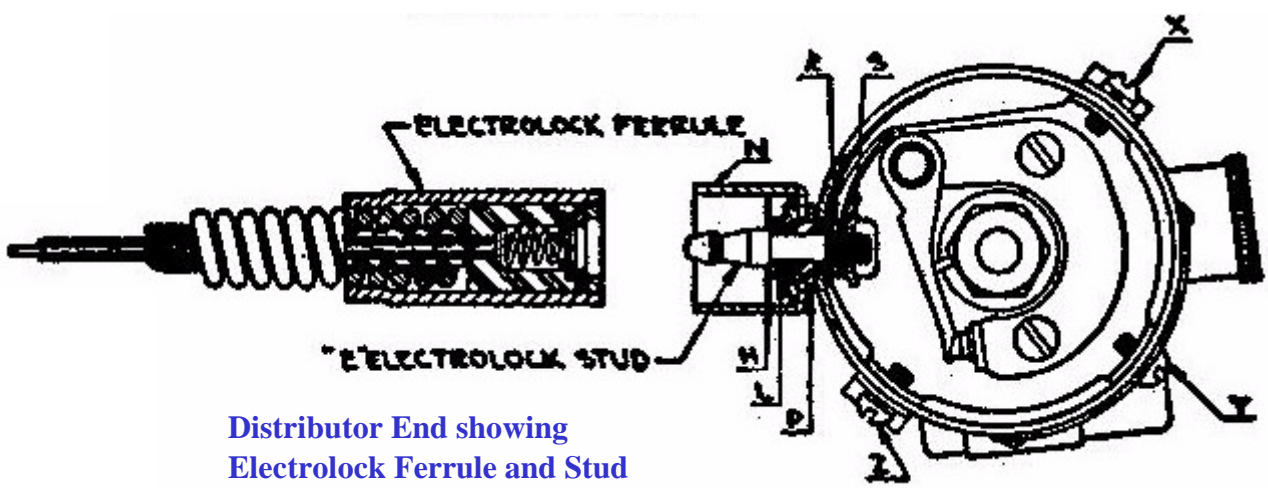
FIG. 17.  
Type 9-B "Electrolock" in Unlocked or "ON" Position.



Ignition Lock - No Gas Gauge

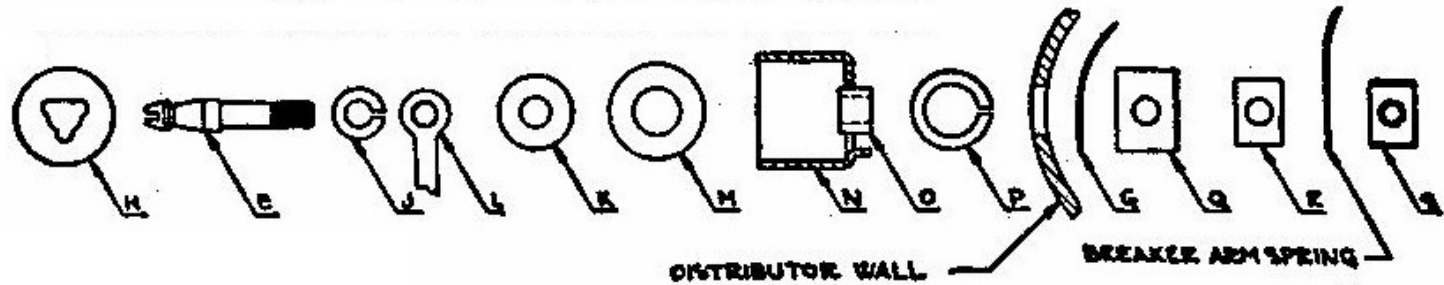


Ignition Lock - With Gas Gauge



Distributor End showing Electrolock Ferrule and Stud

## Exploded View of Electrolock Stud on Distributor



## Exploded View of Electrolock Ferrule

