

WHY WON'T IT RUN PART I

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Western Maryland M-9, No. 67

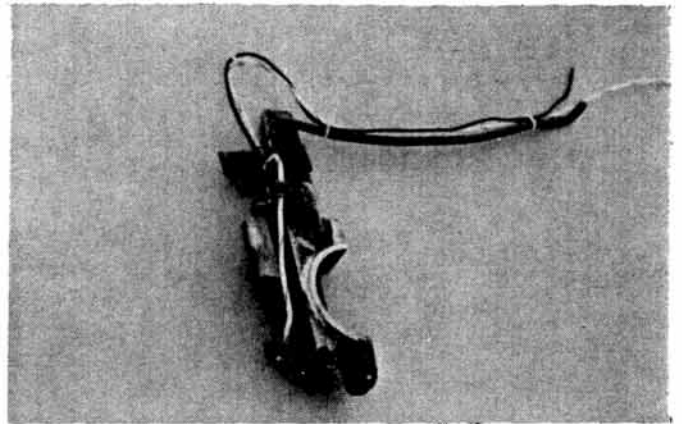
As you are putt-putt-putting down the track enjoying the scenery on your favorite railroad, the exhaust noise on your track car suddenly becomes quiet. Signalling your intention to the car behind, you ease to a stop in a shady spot. "Now what!"...you ask. The intention of this article, which is the first in a series of articles, is to help you out of this all too familiar jam, by providing step-by-step procedures to help you get moving again. Along with this, we will learn ways to *prevent* the breakdowns in the first place, by learning some simple procedures.

Although most of the information in this series of articles will be aimed primarily at two-stroke engine equipped cars, much of the information applies to all cars.

Now, back to our poor fellow stopped along the right-of-way. Since he obviously wants to get going again quickly, so as not to hold up the other folks, let's eliminate some of the obvious causes. 1.) out of gas, 2.) passenger's camera or coat brushed against or turned off the ignition switch, 3.) dead battery, 4.) plug wire fell off, or was knocked off by heavy weeds. Next, check the coil for a "buzz". With the ignition turned off, crank the engine up to top dead center, remove the crank, close the ignition switch, and listen for the buzz. It may be necessary to move the timer lever a bit, to find the correct position to enable the points to close on the engine.

If the coil doesn't buzz, turn off the ignition and remove the plug. Connect the plug wire to a new plug, lay it on the frame of the car, and watch for a spark as you turn on the ignition. No spark could mean that the plug wire is bad, or the spark is shorted out somewhere. Since this is a rare problem, the new plug should allow the engine to start on the first pull. Of course if the ignition box has a lot of moisture in it, the spark can jump across the top of the coil.

If there is no buzz from your coil, get out your clip lead. I would heartily recommend that every tool kit contain one of these. The lead is simply a three to five foot length of 16 gauge insulated, flexible wire, with an insulated alligator clip soldered to each end. You can check for power to the coil by sparking the clip lead from the BAT terminal on the end of the coil (with the ignition on). No spark means no voltage to the coil. The ground side can be checked by connecting the COM terminal of the coil to a point on the engine with the clip lead. With the ignition switch on, buzzing should occur because you have bypassed the timer.



Note how Dick Ray has cable tied his timer wiring to minimize snags.

Photo By Dick Ray

If no voltage reaches the coil, look for a broken wire to or from the ignition switch, or a dead battery. If the trouble seems to be in the timer circuit, look for a broken wire at the timer. The timer wires tend to break, because they move a lot.

The photo shows one way to prevent this breakage, by fastening the wires to the timer control rod with wire ties. A small loop at the timer absorbs movement there (kind of a "strain relief") and another loop or slack at the lever end keeps the wire away from the throttle rod. It also helps to run the wires through the loop of one spring clip on the timer, before connecting them to the other clip. A ground wire is shown, even though late model timers are supposed to be internally grounded. The external wire is insurance.

If power and ground seem to be OK, then try the clip lead from the moving vibrator point to the coil COM terminal as discussed in a previous article in **THE SETOFF**.

The foregoing trouble shooting steps are for cars wired with a grounded battery, as normally found with a generator system. Older cars had the ignition switch in the ground side, so that the driver would not get a shock when turning the ignition switch off. The procedure will be slightly different for these cars, but if the owner has memorized the wiring, the steps will be obvious.

Most ignition failures on the rails can be cured with the procedures presented here. Fouled plugs are the most common problem. Please do not install the fouled plug that you removed the last time that the engine quit...throw it away, and use only new plugs. Keep several on hand for those emergencies.

If your car still does not run, keep in mind that any gas engine needs only air, fuel, compression, spark, and the proper sequence of events to run. The next article will address fuel system mixes.