

SNAPSHOT

TIPS FOR WIRING A SCALE MODEL CAR ENGINE

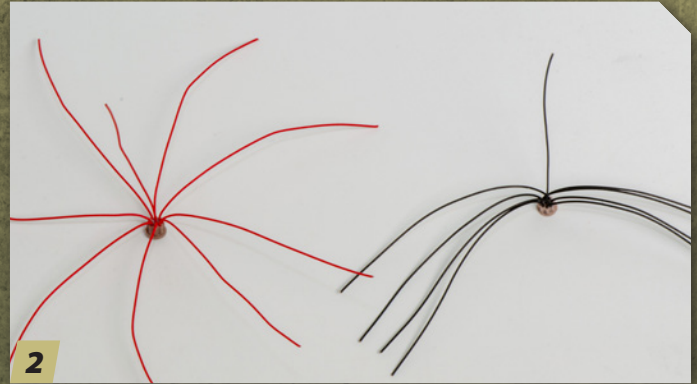
ADDING ENGINE WIRING to your next scale model car project can be as simple as routing the spark-plug wires or as extensive as running every wire and line found in a 1/1 scale engine compartment. Here are some tips to help get you going.

By Tim Boyd



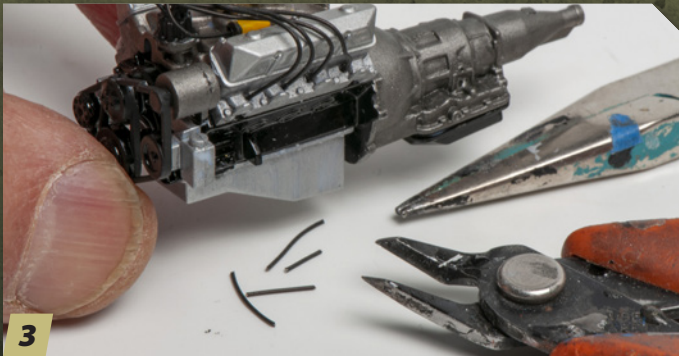
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Aftermarket pre-wired distributors expedite ignition wiring. Use a pin vise holding a No. 70 or No. 75 bit to drill out the molded-in spark plugs. Internet references will assist you in locating the spark plug locations for your particular engine (this example is a Ford FE V8).



2

Fan out the distributor ignition wires like a fan (left), then work your way around the distributor routing every second wire across the top to the alternate side (right). The shorter wire sticking straight up connects to the ignition coil.



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Mount the distributor to the engine block and run each wire to its corresponding spark-plug location, trim it to length, and slip the wire inside. Shape the wires to show realistic droop while keeping them from touching the engine or exhaust manifolds and glue.



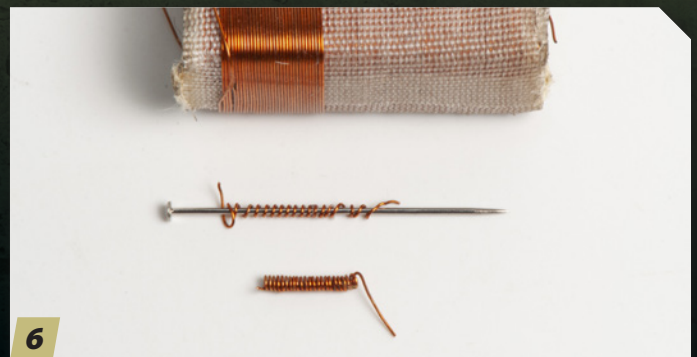
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Complete wiring on the other side of the engine and run the coil wire to the ignition coil (yellow here) to complete the ignition wiring process. Miniature spark-plug wiring looms (not shown) can add more realism. You can stop here, but there's more you can do!



5

For instance, most early generation Corvette engines used special shielded ignition cables to eliminate radio static due to the non-insulating properties of the fiberglass bodies. Craft store elastic metallic thread provides a believable scale simulation.



6

A simple detail to add is a throttle return spring. Begin with fine wire (34 or 36 AWG) — I salvaged mine from a slot-car armature — and tightly wrap it around a small drill bit or straight pin. Compress the spring together to form a tightly wound appearance.

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Slip the throttle return spring off the drill bit or pin and install it on the engine, running from the carb linkage to the front of the intake manifold. Use references for your specific engine to determine the correct location and color for the spring.



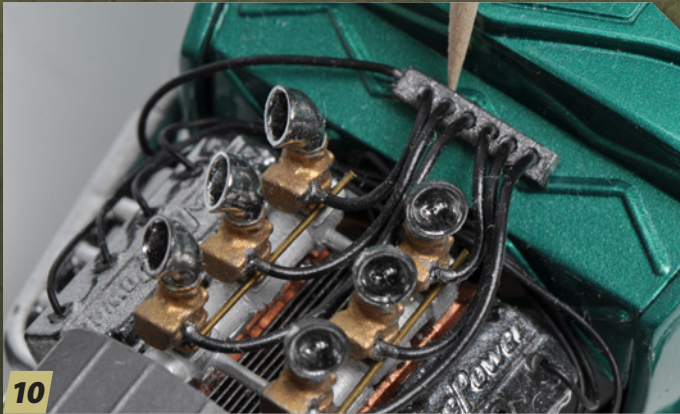
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Engine heater hoses often run to and from the top of the engine back to the firewall. Form these from wire with a solid metal core and pre-shape them with a natural drape and curve as shown. Some kits include decals with printed part numbers and corporate logos for engine heater and radiator hoses.



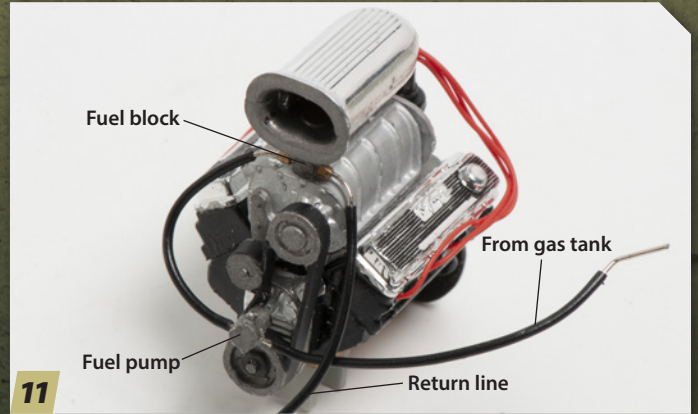
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Heater hoses are sometimes a faded red color rather than black. Typically, attach heater hoses to the model's engine during its initial assembly. Attach the opposite ends of the hoses to the firewall or heater during final assembly.



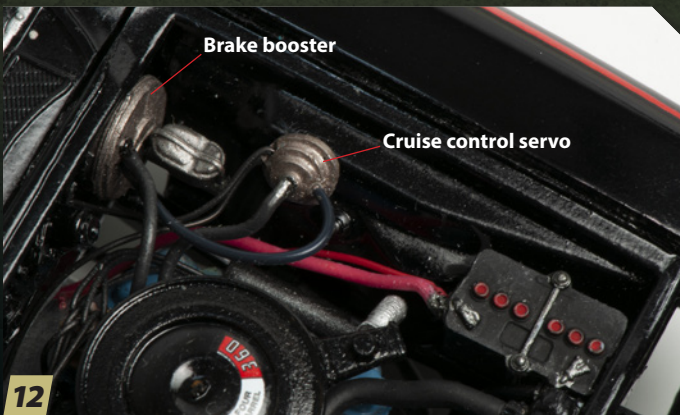
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Fuel lines differ widely on each engine type. Here, six individual fuel lines run from each carburetor on this hot-rod engine to a fuel block mounted on the firewall. A single line runs between the fuel block and gas tank, routed through an electric or mechanical fuel pump.



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A simplified early-to-mid 1960s-era gasser drag racing fuel line installation is shown here. It has lines from the gas tank to the fuel pump, fuel pump to the fuel block at the front of the blower, and then a fuel return line from the fuel block back to the tank.



12

Engine compartment accessories offer additional possibilities for wiring. For instance, wire the cruise control servo to the throttle linkage, power brake booster, and speedometer. Note the vacuum line between the manifold and brake booster and the battery cables.



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This Mustang Boss 302 V8 includes every factory emissions component and its associated wiring and plumbing. The step-by-step construction can be found in the January 2000 *Scale Auto* magazine or on the "35 years of Scale Auto" DVD from Kalmbach Media. **FSM**