GETTING STARTED IN CAR MODELING
Ferrari Supercars are always popular kit subjects – especially the Enzo. Tamiya did a superdetailed glue kit, Fujimi did a curbside kit, and Revell previously issued its own full-detail glue kit.

Revell’s latest Ferrari is a curbside snap kit of the Enzo, and it is all-new. Ferrari kits have sold well for Revell, especially snap kits, and this is the last true supercar Ferrari made.

These snap kits cater to younger builders; a hot subject of a hot car is perfect subject matter.

The model isn’t intended for serious adult builders who can still choose a full-detail glue kit, but it most certainly is an excellent canvas for a bit more detail for any level of builder.

I have unbuilt Tamiya and Revell Enzo glue kits, and I have a lot of extra detail parts for the Tamiya kit, yet this new snap kit interests me enough to give it a bit of extra detail to finally get a built Enzo on my shelf.

Utilize the same care and craftsmanship generally reserved for full-detail kits, and you can easily end up with a finished model that defies the humble snap-kit origins.

**BODY** Revell got the shape of the Enzo nearly to perfection. The complicated body mold required separate left- and right-side scoops behind the doors, and the front bumper is separate.

The most obvious simplification is the integral taillights, molded to the body. They will require a bit extra paint-detailing to make them look realistic.

There is no sign of a windshield wiper or interior rearview mirror. There are four “webs” molded to the black interior tub that serve as side scoop/extractor vents in front of and behind the doors.

There are also four upper body vents molded to the body, and separate black front and rear grilles that install inside the front and rear bumpers.

**INTERIOR** The interior assembles platform-style and has pretty good engraved detail. The one-piece seats have integrally molded racing-harness seat belts.

The dash has a separate steering column (with control stalks, but no paddle shifters), and a separate steering wheel.

Door panels are well detailed, and they snap in place, trapping the seats to the floorpan. The 1:1 car has a molded/ textured carbon-fiber floor with concentric arcs; Revell modeled the floor to depict carpeting.

There is a separate bulkhead behind the seats, with a small separate window.

**ENGINE** The engine compartment has some basic molded detail for a control box, headers, muffler, and shocks.

There is a separate engine insert (molded in red, in contrast to the molded black engine compartment/ interior) that snaps in place, and a separate intake plenum that locates on top of that. This gives just enough visual detail to look correct, but considerably less detail than the full-detail glue kits.

Because the engine cover is integral to the body, this is a curbside kit and the engine room detail is quite satisfactory in that regard – especially for a basic snap kit.

**CHASSIS** The chassis is a simple one-piece affair with minimal engraved detail. It attaches to the rest of the model with four small screws.

There are four separate disc brakes that also locate the axles and wheels.

Do an easy Ferrari snap kit

How to improve Revell’s Ferrari Enzo

by BOB DOWNIE

Bob chose a custom two-tone paint scheme for the Enzo, as seen on many of today’s Ferraris.
The brakes are engraved with cross-drilled discs, and there is some molded caliper detail, finished off with emblem stickers for the calipers.

MOCKUP As I could see from the box art build, this model has a lot of potential. I assembled it completely out of the box with no paint, glue, or detailing, in about 20 minutes. This gave me a chance to look to see where I could add extra detail, and it gave me a rough idea of what to expect when finished. The model sits correctly, and the wheels are fairly well detailed. The tires are unfortunately of the generic-sidewall variety that conspire to make the model look more toylike than necessary, especially when some diecast “toy” models in the same scale manage to have much-better-looking generic tires.

GAME PLAN I decided to add a few areas of detail that aren’t too difficult to accomplish.

I save all of the excess nylon-mesh grille and vent material from many of my imported kits, and I used that to add a bit of three-dimensional detail to the front and rear grilles and to the upper body and side intakes. The interior design is simple, and there aren’t many separate parts, but visible detail is well engraved. I hand-painted the racing harnesses. The dash was painted in flat black and the carbon-fiber areas are painted in metallic black with a deep clearcoat. Enzo seats were available in black, red, or tan leather.

The engine compartment is detailed with flat black and silver paints, with the exhaust headers painted steel. The intake plenum was painted gloss metallic black, with flat black and silver details, and strips of Bare-Metal foil for hose clamps to the air boxes. I used a chrome “prancing horse” transfer emblem on the intake plenum to replace the sticker. The four upper-body vents are molded in place, and they look difficult to paint cleanly without getting flat black paint on the surrounding painted surfaces. To me, it was easier to grind these areas away from the inner body with a motor tool, and replace those areas with the mesh.

The upper dash has two flat, recessed panels that are see-through mesh on the real car. I cut out these areas and replaced them with some finely woven nylon mesh.

The interior and engine compartment prior to installation. The only extra details are the nylon mesh for the dash and the chrome transfer emblem for the intake. For a simple curbside snap kit, the level of detail is quite good, and careful paint-detailing makes for a great appearance. I used gloss metallic black paint mixed with a bit of gunmetal and liberally clearcoated to give a decent scale appearance to the visible carbon-fiber.

FUN BUILD, LOOKS GOOD TOO This was a fun kit to assemble and detail, it really looks great finished. I feel like a big kid again every time I finish up a snap kit – yet who can argue when they often end up looking as good as full-detail glue kits?

This model actually can look better as a shelf model than a finished Tamiya Enzo, because Tamiya’s kit has so many opening parts that rarely, if ever, fit particularly well when closed. A kit like that is best displayed all-open to show off the cool technical details, where this kit is perfect as a shelf replica with everything closed, where you can admire the model for its styling beauty.

For beginners, this gives them a fun project to assemble whether completely out-of-the-box or adding paint-detail. For experienced builders and everyone in between, this kit is a great canvas for a neat shelf model or slump-buster.
The front and rear grilles are molded solid, with only faint engraving. I cut tape templates from these parts, and used them to trim overlays from scrap kit mesh. The small pieces simply mount between the black molded grilles and the body; if they are cut to the proper size, they are trapped in place, with no need for glue.

The intake plenum is the most visible part of the engine compartment when assembled. This part is mostly carbon-fiber and glossy, but the kit part has a couple of prominent sink marks in the center of the piece that need attention.

The separate front bumper has a vertical parting line between it and the body. Because all of the parts fit inside with the bumper installed, I glued the bumper in place and will fill the vertical cut and scribe a new horizontal panel line.

The wheels are plated, but Enzo wheels were painted bright silver. My paint scheme is gloss black wheels with a red pinstripe on the lip, detailed to look like the FXX racing variant of the Enzo. I stripped the plating, and was happy to see them molded in red. I might be able to exploit the molded color for the pinstripe.

The wheels were sprayed gloss black, and I used a sanding/polishing stick to remove the paint from the wheel lips. The red shows through, but it is a bit too dull and not vivid enough. I will have to carefully hand-paint the red pinstripe edges.

The thin red pinstripe was carefully brush-painted on the wheel lip. The center caps were painted with chrome silver paint, then overcoated with transparent red for an anodized appearance like the FXX. The center caps are from a leftover set of Ferrari decals from my parts box.
Small pieces of nylon mesh were added to the openings made previously. Cutting and fitting these were easier to detail the grilles than trying to paint them on the finished/painted body.

The upper body has four molded vents. These areas will be difficult to paint. I decided to grind them away from underneath to install some scrap parts-box nylon mesh grille material.

The body was primed and block-sanded to level the faint-but-visible mold lines, ripples, a few sink marks on the hood and fascia, and to true the lower front fascia.

I scrounged an extra wiper from another review model that had an extra set from a right-hand-drive setup that I did not use; if Revell wasn't going to include a wiper, I'm happy they did not mold one to the windshield; it would have looked odd.

From the same set of metal transfer emblems used for the intake, I added "Pininfarina" side emblems, a rear Ferrari emblem, and the prancing horse "Cavallino" to the rear grille. The kit includes stickers instead of decals, and somewhere along the line I lost the stickers, which I wouldn't have used anyway.

The finished model looks great.
Add a simple base to enhance your favorite car or truck.

By Evan Hermel

The base provides a nice display for a Fujimi Mini Cooper Evan built for his wife.

A Simple Cobblestone or Flagstone Vignette Base for your favorite car or truck model can easily be made during the course of a weekend. All it takes are a few materials and some basic painting techniques.
The display base is a 7” x 9” decoupage plaque purchased from Michael’s. If you wish to stain or varnish the base edges, this would be the best time to do so. The raw material for the base will be any brand of air-drying modeling clay. The $6 package of Fimo clay dries to a nice terracotta color.

Add chunks of clay and to the base until the entire surface is covered.

Make sure you don’t get any fingerprints in the clay! They will be become visible when you start painting the surface. Although I am modeling a street surface only, a sidewalk could be adding by applying a second layer of clay along one of the edges.

Use a ruler or a straightedge and a hobby-knife blade to scribe parallel grooves into the clay. Cobblestones or bricks come in different sizes, so use the real thing as a guide. The grooves are spaced about 5mm apart.

Here’s how the parallel lines look when they are finished. In hindsight, the base would have more visual appeal if the lines had been scored on the diagonal to the base edges.

Lay the ruler at 90 degrees to the grooves, and carefully cut in lines at alternating spaces. A chisel-type blade works well for this part of the project. Allow the clay to air-dry completely; 24 hours should suffice.

Now the fun begins! Mask the edges and spray the surface flat black; I used Badger Engine Black. I prefer using acrylic paints for their dead-flat finishes, easy water cleanup, and lower toxicity.

When the black base coat is dry, drybrush some dark grey (Tamiya XF-63 German Grey used here) over the surface. Allow to dry and repeat the drybrushing process using medium and then light grey shades. I used Model Master Dark Gull Grey and Ceramcoat brand Grizzle Grey, respectively.

As a final step, randomly drybrush some earthtone shades over several of the stones. I used Tamiya XF-72 JGSDF Brown.

See “The Art of Drybrushing” in the April 2017 issue on page 36 for tips. To order back issues, visit scaleautomag.com or call (800) 533-6644.
Tim Boyd’s 1930 Model A (left) and 1961 Chrysler New Yorker are among the many models that have benefitted from these building tips.
A FEW EXTRA MINUTES spent adding details can make a big difference in the appearance of even the simplest car model.

In this article, I will demonstrate the ten building steps I take with every project – from an out-of-the-box shelf model to a highly involved kitbashed-and-partially-scratchbuilt undertaking. These tips are perfect for beginning-to-moderately-experienced builders who want to take their projects to the next level. The products and techniques shown in this article are the ones that have consistently provided the best results for me.

Look over the list and decide which of these hints would work for your next model, then give them a try. You’ll be surprised and pleased with the difference they make.

AUTHOR’S NOTE: Three 1960s/1970s model car builder/writers – Don Emmons, Dennis Doty, and Ben Millsap – developed most of the techniques shown here. Their building and detailing innovations continue to inspire us. Thanks!

1. FILL EJECTOR-PIN MARKS
In addition to locating and removing molding parting lines from exposed surfaces, be on the lookout for “ejector pin” or “knockout pin” marks such as these. A quick application of automotive body-shop spot putty, followed by a few swipes of a sanding stick, can minimize or eliminate these surface flaws.

2. USE A WASH
For grilles and parts such as these AMT 1966 Nova SS rocker panels, thin some hobby flat black enamel until it flows easily, then dip a paint brush into the solution and touch it to the parts. The paint should largely flow into place. After the paint dries, wipe the raised surfaces with your finger or a soft cloth.

3. PAINT THOSE TAILLAMPS
For plated taillamps, add a coat of Testor’s Stoplight Red Metallic enamel (center of photo). Silver metallic can represent backup lamps. For translucent red taillamps, adding a coat of chrome silver to the back gives a much more realistic appearance (lower center left) than the unaltered parts (lower far left). For 1980s blackout-style taillamps, flat black applied to the backside approximates the effect (upper left).

4. SIMULATE CARPET WITH FLOCKING
Any model with an exposed interior will benefit from the addition of flocking to simulate carpeting. Brush on two thick coats of a similar shade of flat-finish paint, one right after the other, then sprinkle lots of flocking on while the paint is still wet. After a few minutes, shake off the extra flocking, and voilà! – scale carpeting!
ADD LENSES TO THE DASH
After detailing the gauge panels with kit-supplied decals or thinned flat black paint (see Photo 3), add scale lenses. Mix some five-minute epoxy, then fill up the gauge cavities with the mixture, using a toothpick to add enough until the lenses have a slightly domed/curved appearance.

PAINT THE UNDERSIDE
It is amazing how many underside surfaces unintentionally end up being visible on finished models. The safest and best approach is to paint all such surfaces. If your project doesn’t accommodate spraying the underside, use a brush and matte-finish paint, such as Tamiya XF-1 Flat Black, to accomplish the same result.

REMOVE GLOSS FROM TIRE TREAD
Tires’ appearance will improve by having the tread surfaces scuffed or sanded to approximate a road-driven appearance. Some rougher (240- to 360-grit) sandpaper or a coarse cushioned hobby sanding stick will get the job done in just a few minutes.

SILVER PAINT ON PLATED LENSES
Many 1960s-1970s model kits omitted clear lenses from the headlamps, instead having an engraved, plated substitute (see tweezers). If your project does not allow drilling out headlamp buckets and adding clear lenses, paint the surfaces of the plated lenses with flat silver paint, such as decanted Testor’s 1246 Silver Metallic or Tamiya XF-16 Flat Aluminum.

PRECUT FOIL STRIPS
For 1950s-1970s models, adhesive-backed chrome foil is a must for a realistic scale appearance. Always use a new hobby knife blade and the lightest pressure. A metal ruler can help you precut strips of foil for straight trim pieces, such as the molding across the top of the front fender and rocker panel of this JoHan 1961 Chrysler New Yorker.

USE RUBBING COMPOUND & WAX
For single-stage hobby or automotive paints, a patient-yet-persistent application of rubbing compound, followed by wax, can provide a glossy and scale-correct result. My favorites are Tamiya rubbing compounds, and the same “The Treatment” Model Wax that I’ve used on my projects for the last 40 years.
How to scrub your model free of cringe-worthy blemishes

by MARK JONES

The tedious task of cleaning up mold lines is isn’t all that complicated. However, there are some lines that simply are more challenging. These run along most fenders and rooflines. However, at least they are easily accessible. One particular spot that continues to be troublesome during builds is where the fender meets the A-pillar. Often there is additional detail such as window trim, drip rail moldings, and door lines that require extra work. Here are my coping tips.

On this Datsun 240Z the seam along the front fender and continuing up the A-pillar over the roof has been highlighted with pencil graphite. First, I scribed around the windshield frame using the back of a used hobby knife. This ensures detail won’t be lost or marginalized.

Starting with used 400-grit, wet/dry sandpaper, sand the seam on the top of the fender up to the base of where the windshield was removed. Previously used 400-grit works well for this as it’s not as aggressive and is more pliable than new sandpaper.

Next, the seam on the A-pillar was removed using the window trim as a guide, but try not to sand any of the window trim more than absolutely necessary.

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An old toothbrush works great to remove sanding debris and should be used throughout the process to check your progress. It’s better to be safe and check often than to oversand the area.

Once the mold line appears to be cleaned up, do one final check by applying a light coat of primer. Usually I don’t prime every kit body prior to painting, but in this case seeing the dirt and graphite helped me realize more work needed to be done.

Next, do a quick wet-sanding using a fresh piece of 1000-grit sandpaper. The cleanup of these mold line areas are now done. Also, I strongly recommend working on both sides of the car’s body at the same time for continuity.

After total cleanup and prepping, a base coat of gray was applied before giving the car its final red finish.

This Ramcharger’s mold line runs along the front fender’s trim strip, makes a 45-degree turn as it runs up to the A-pillar, then follows the door line across to the B-pillar and finally around its side windows to the C-pillar.

Right out of the box the kit also has a nasty gash from manufacturing and packaging. That gash cuts through a few details and needs some major work.

Before removing the mold seams, the side window trim was quickly rescribed. It’ll be cleaned up better along the way. This step creates an initial foundational path. The small section of mold line behind the side windows then can be easily sanded off.

The seam between the door and side windows was hit with 400-grit paper folded tightly to fit the groove that was scribed around the window and the body shell’s molded contour. The seam running along the front door line was eradicated with a few light passes.

The first step to cleaning the seam off the trim strip was to mask under it with two pieces of moderately thick tape. This helps protect the thickness of the trim as well as the “Ramcharger” script below it.

After sanding the diagonal seam off the fender, the peak of the trim was sanded and shaped in long, smooth passes. Think of this as trying to replicate the action one would take to shape a surfboard.

Only about five to 10 light passes with the sandpaper are needed, depending on the amount of flash along this mold line. Use the shape of the trim on the door as a guide for the outline and height.

Pull off the tape and check your progress. This looks good, but there’s still part of the seam in front of the trim that needs to be removed.
Now for that gash on the driver's side. It created higher edges along both sides of the cut, so those peaks were sanded flush with the surrounding body. Extra care was used around the door handle and lock. The toothbrush came in handy here and was used to get the dust out of the recesses.

While it may seem counterintuitive the gash was scribed deeper and cleaner with the knife. This allows the filler to have much better adhesion and make for a more uniform repair.

A toothpick was used to work some thick superglue into the gash. A little of the CA built up above and outside the edges, naturally. So again take extra care when working around the door handle and lock in order to not get CA on them.

The same piece of 400-grit sandpaper can be used to knock down and feather the CA filler immediately after it dries. The knife was used on the door and window lines. At this point there's no way to tell if the repair is complete.

Next apply a little primer. The result? The fix is clearly not complete. There's still a ghost of the slice and remnants of the filler near the panel lines.

Another round of sanding with the trusty 400-grit paper was in order. The primer acted as both a filler and a guide.

With one last coat of primer applied to make sure the gash is hidden, it's time to move on to other parts of this truck project.

This Corvette has parting lines running along the front fenders, up the A-pillars and over the roof. One issue is where they cross the roof and follow along the soft contour lines. The front fenders' peaks will need to be kept sharp when sanding the seams.

To protect the roof contours, thin masking tape was applied to the recessed center section following the shapes. In this case, the tape needs to be thin enough because the contour is so delicate.

Sanding from the inside outward, the seam is carefully scuffed off. For this I used the same piece of 400-grit sandpaper. You should now be able to feel when the seam is gone and a uniform edge is left.

After the tape is removed, a light smoothing with 1000-grit sandpaper will finish these two areas.

It would have been easy to obliterate those body lines when sanding the seams, but it would consequently affect the look of the car.
A black Sharpie was used as a guide to remove this seam section. The goal is to get the ink into the deepest recesses of the mold lines. This will work like a primer or a guide coat when sanding.

First, the fender’s outer facet was sanded along only one side of the seam using extra care to only follow the fender’s form. Do not attack the seam straight on at the peak. What should remain of the Sharpie line, is a crisp uniform edge at the peak of the fender and nothing on the outer face.

The same tactic is then used on the top facet of the fender. Again the goal is to remove the ink only on that one plane, thereby keeping intact the fender’s crisp peak. In this case, a couple low spots are still visible as two black dots near the A-pillar.

Even a little more sanding with the same piece of paper was not going to eliminate them. The solution? A well-worn 200-grit sanding stick. If it were new, it would be far too aggressive but if you go with new, 400-grit would be the way to go. A file is another option, but the sanding stick is much more forgiving and less likely to leave gouges that would need to be addressed later.

Sans primer, the seam is visibly gone. While it may be argued the hard edge on the front fender is too harsh and inaccurate, there are two options. Depending on the type of paint and how heavy the application, it’d be beneficial to leave the edge the way it is and let the paint soften the edge. If the paint is not expected to affect the shape or body lines’ look, slightly roll the edge of the peaks with 1000-grit sandpaper. I recommend the same technique on rear fenders.

I chose to keep the hard edges on the Vette. The model was made to represent a possible composite of my real car mixed with a good friend’s ride. It was finished with Tamiya TS-50 mica blue, decanted and airbrushed for the base color. Scale Motorsport’s No. 1424 plain weave carbon fiber decals were used for the roof. The hash stripes, windshield banner and license plate came from a 2007 IPMS convention sheet and I made a few custom decals for the other personalized graphics.

Here are my three finished models, no unsightly mold lines to mar their finish!
REAL-LIFE vehicles need a spaghetti bowl full of wires, lines, and hoses in order to run.

As modelers, we have no such worries. We have the luxury of being able to add as much or as little detail to our builds as we want.

There’s no denying the classic look of a well-executed box-stock model, but adding just a few wires under the hood or lines under the chassis can go a long way toward increasing its believability.

Basic additions such as spark plug wires and fuel lines are a great and relatively easy place to start. But what about other things – such as vacuum lines, radiator and heater hoses, generator and battery wiring, brake lines, and assorted other details?

Adding such detail to a vehicle requires at least a peripheral knowledge of what-goes-where in terms of wires and hoses. Such knowledge allows us to modify existing systems to fit a particular model, or even design our own systems completely.

The configuration of a given engine may be a bit different, but the basic principles of automotive function have, with a few exceptions, remained constant since the invention of the internal-combustion engine.

With that in mind, I’ve prepared an overview of some of the more important automotive systems that can be duplicated in scale. It’s always a good idea to research your subject on line or in magazines, but this basic information will point you in the right direction.

Try some of these wiring and plumbing tips on your next model, and show us your results!
THE MOST COMMON addition to kit engines is spark plug wiring, where individual wires run from the distributor cap to the various spark plugs.

But there’s more to the ignition system than that.

It all starts at the battery, where a “negative” (black) wire runs from the negative battery post to the frame.

A “positive” (red) lead runs from the positive battery post to the starter solenoid (not the starter itself).

Another wire runs from a second post on the starter solenoid to the voltage regulator or a solenoid mounted on the firewall.

As noted earlier, placement of these components will vary from vehicle to vehicle.

A thin wire runs from the voltage regulator to the post on the coil, which can be mounted on the firewall or a bracket on the engine.

A second thin wire runs from another post to the side of the distributor, topped off with the wire that we add most often – it’s the one that is quite similar to the spark plug wires and runs from the center cap of the coil to the center cap of the distributor.

While you’re at it, add a small vacuum tube from the distributor to a fitting at the base of the carburetor. That line is for the vacuum spark advance.

ON A 1:1 VEHICLE, while the engine is running, the battery is being charged by the alternator or generator.

Alternators are more efficient than generators, and produce more electricity, which is exactly all I know about either one of them.

But fortunately, we only need to know how to wire them to create an eye-catching detail.

Both are belt-driven and usually appear in kits as part of the fan belt casting.

A “positive” wire runs from the battery to the back of the alternator. This wire can also originate at the “hot” wire location on the starter solenoid. A “negative” runs from the alternator to the engine block, and serves as a ground. Two smaller wires run to the voltage regulator on the firewall.

If you’re using a generator, simply run two wires from the voltage regulator to the back portion of the generator. The unit is usually grounded through the mounting bracket.
**FUEL SYSTEMS**

**COOLING SYSTEM**

**FUEL SYSTEMS**

THIS SYSTEM is pretty straightforward, but it can be configured several ways.

Fuel is stored in the gas tank, then pumped to whatever injection system you happen to be using on your model.

Electric fuel pumps are generally placed along the fuel line, under the vehicle; mechanical fuel pumps are attached to the engine block. A fuel filter is placed in the line before the fuel gets to the carburetors/injectors.

If you’re using one carburetor, a single line runs between and pump and the carburetor.

For multiearb setups, the fuel line runs into a fuel block, which distributes fuel to each carburetor. The fuel blocks can be mounted on the firewall or on the intake manifold near the carbs.

Fuel injectors are fed the same way, and the fuel block can be located on the engine cover plate between the cylinder heads, with a line going to each injector.

**COOLING SYSTEM**

**COOLING SYSTEM**

THIS SERIES OF HOSES comprises the engine cooling system and the cab heating system.

An upper radiator hose runs between the thermostat housing and the radiator; the lower hose goes from the radiator to the water pump, which is mounted on the front of the engine.

When the engine heats up, the thermostat opens, allowing hot coolant to enter the top of the radiator.

The coolant cools as it flows down the radiator tubes, out through the bottom hose and into the water pump, which circulates the coolant through the engine block, where this continuous-flow cycle starts all over again.

Additional hoses, mounted to the thermostat housing and the water pump, allow coolant to flow to a heater core (basically just a small radiator) in the cab to provide heat for the chilly occupants.

Sometimes-overlooked details in this system are aftermarket hose clamps and an overflow pipe that in older vehicles simply drained out the bottom of the vehicle.

Newer vehicles – or upgraded older ones – collect this overflow in closed containers, affectionately called puke tanks.

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NOW THAT OUR MODELS are wired and running down the road, we need to be able to stop them.

Brake systems aren't too complicated, but there are many different configurations.

Older vehicles typically have drum brakes all around, and some may have a simple “fruit jar” master cylinder, with only one brake fluid line extending out the front.

Newer vehicles use a dual master cylinder with two lines.

Brake configurations can consist of drums all around, disc brakes in the front and drums in the back, or disc brakes in all four corners.

A disc/drum combination, as shown in the drawing, might include a proportioning valve to adjust pressure between the front and rear, and/or residual values placed in the line, but that depends on the subject.

Brake lines are typically “hard” lines made of steel, with short flex lines to compensate for suspension movement.

Power brakes enlist the use of a booster mounted behind the master cylinder. If your model includes this feature, run a vacuum line from the booster to a port on the intake manifold or the base of the carburetor.

THIS IS ENTIRELY separate from the cooling system, and isn’t included on kits as often as other engine components.

The compressor hangs on the engine, with brackets similar to those that mount the generator or alternator, and is driven by one of the belts at the front of the engine.

A condenser – basically another small radiator – is typically mounted in front of the cooling system’s radiator. An auxiliary electric fan is mounted in front of the condenser to push additional air through the two cooling devices.

Piping includes a line from the top of the compressor to the top of the condenser; another line exiting the condenser and running through the firewall to the evaporator, which cools the cab. A return line runs from the evaporator back through the firewall to a dryer, then on to the compressor.

An electric clutch at the front end of the compressor turns that unit on and off. Wiring runs from the clutch to the AC controls in the cab.
IN ADDITION to the major components we’ve covered here, there are various clusters of wires that can be added to dress up our models. Wiring harnesses for headlights and parking lights; horns; electric fans; and other items at the front of the vehicle can be hinted at by tucking the ends somewhere out of sight in the engine compartment, running them along the fender wells and feeding the other ends through the firewall, where they’ll be hidden under the dash.

Then there are the assorted other wires and tubes that run to oil pressure, temperature, and other dashboard gauges. These lines can also run from their respective locations on the engine through the firewall, where it would be impossible to see whether they were actually connected to anything.

Yes, I admit that’s cheating (I can already see the purists writing nasty notes), but our hobby is an art of illusion, and the illusion of functioning wiring produces a convincing model that looks just right.

SOME KITS INCLUDE a power steering pump as part of the belt casting. But if it’s not in the kit, a pump would be easy to install, using aftermarket brackets and a new belt.

The pump is usually hidden near the bottom of the engine on the driver’s side, so lines between the pump and the steering box would not be obvious – but it sure would be a cool feature to add!

Two lines extend from the back of the power steering pump to the top of the steering box. They are flex lines connected to hard connections to compensate for engine movement.

Rack-and-pinion systems sometimes incorporate a power boost, too. These lines would extend from the steering pump to a “rotary control valve” (since it’s not technically a steering box) in the same manner as outlined above.

Two additional hard lines extend from the side of the rotary control valve to the hydraulic piston connected to the tie rod.

Again, these lines won’t be obvious when looking at the model, but they would add a super-cool touch.

POWER STEERING

IN ADDITION to the major components we’ve covered here, there are various clusters of wires that can be added to dress up our models.

Wiring harnesses for headlights and parking lights; horns; electric fans; and other items at the front of the vehicle can be hinted at by tucking the ends somewhere out of sight in the engine compartment, running them along the fender wells and feeding the other ends through the firewall, where they’ll be hidden under the dash.

Then there are the assorted other wires and tubes that run to oil pressure, temperature, and other dashboard gauges.

These lines can also run from their respective locations on the engine through the firewall, where it would be impossible to see whether they were actually connected to anything.

Yes, I admit that’s cheating (I can already see the purists writing nasty notes), but our hobby is an art of illusion, and the illusion of functioning wiring produces a convincing model that looks just right.

WIREs TO NOWHERE

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