

Dick Flint's beautiful channeled '29 roadster with full race Merc engine, full bellypan, custom upholstery, and red paint job (as shown on the cover) is described on the following pages. The pretty young lady in the foreground, is Barbara Dzaich of Glendale, California.



One of The Finest Roadsters
on the West Coast is this

Cover Roadster

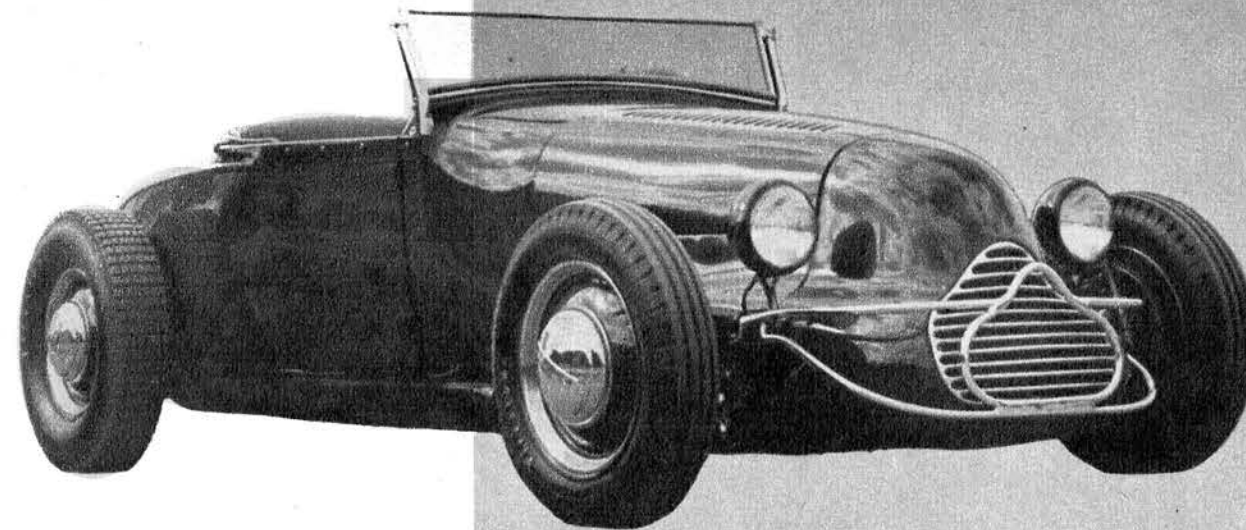
THE cover roadster this month (owned by Dick Flint of Glendale, Calif.) is distinctive in many ways. One of those ways is the fact that it is the first car to appear on a Hop Up cover twice. The first time was way back in November 1951 and it wasn't much of a write up, just two small pages. This time we intend to do better by his fine little roadster.

Dick has been working on his roadster for six years off and on, and hasn't yet reached the point where he is completely satisfied with the results. Since our first write-up on the car he has replaced the Hartford friction shocks with normal Ford Houdialle shocks. Fenders (cycle type) are now being added (due in part to being stopped by the law for lack of same).

Starting with model A frame rails and a 1929 model A roadster body, Dick first channeled the body over the frame rails and mounted it securely. He then made all engine mounts, shock absorber mounts, and brackets of any kind needed to hold battery, fuel tank, tailpipes, mufflers etc. After this had been completed and while Dick was building his engine, the car was taken to Valley Custom where the body work was started.

Dick had a long discussion with Neil Emory and Clayton Jensen, proprietors of the Valley Custom Shop, about the shape of the special front end to be built, attachment of the belly pan.

Race car type front end treatment is sample of beautiful body work by the Valley Custom Shop. All hand formed.



cation of tail lights and general details of the body work and then leaving the job in their hands he returned to his engine building.

The seams on the rear body panel, under the deck lid opening, were filled and the body beading flared in to look similar to a '32 Ford roadster. (See photos accompanying the article.)

The panels in the rear wheel wells were rusty, (as is the case with most cars of this vintage) so Valley replaced them with new panels which are now removable. Because Dick intended to run the roadster at the lakes, he wanted a full belly pan. This was built on the roadster but unlike the body, was made of aluminum.

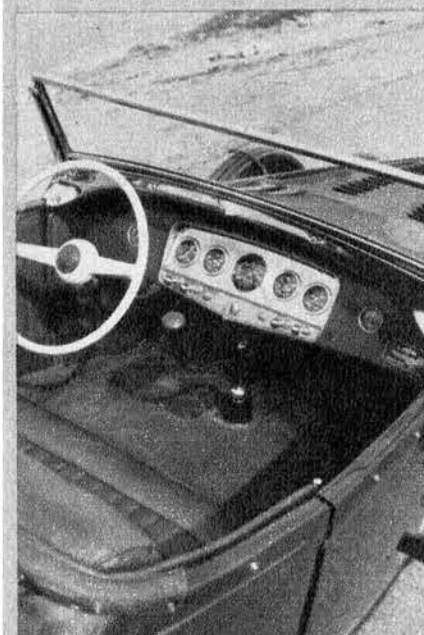
This pan is made in five pieces. A panel under each side running the full length of the car, a center section about two feet wide which is held on with dzus fasteners, the rear panel under the body, and a smaller panel under the rear axle which is also easily removed. By having the underpan made in sections, like this, the driveshaft and rear end assembly can be removed from the car by removing two panels instead of the whole bellypan.

The rear, or easy part, now completed, they started on the front. The word "easy" used here means only in comparison with the rest of the work. No custom body work is "easy."

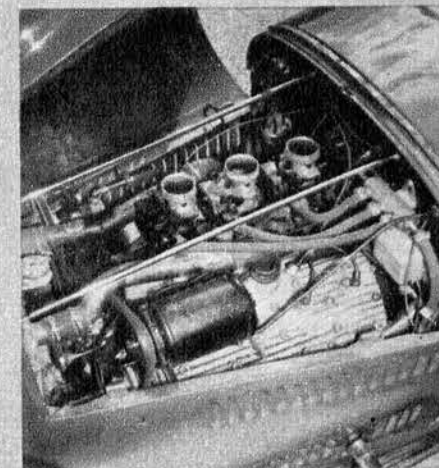
The seam, or joint, where the cowl meets the body has been welded together and filled in giving the body a more "one piece" look. This is helped too, by filling in the hole in the cowl where the stock model A gas tank filler was located. The stock tank was completely removed from the car.

The three piece hood, shell, and grille, are made of aluminum, completely hand formed. After the hoods were completed, they were sent out to Art Engles to have the louvers punched

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Interior of the roadster is complete with brown leatherette upholstery, a rug floor mat and an Auburn panel.

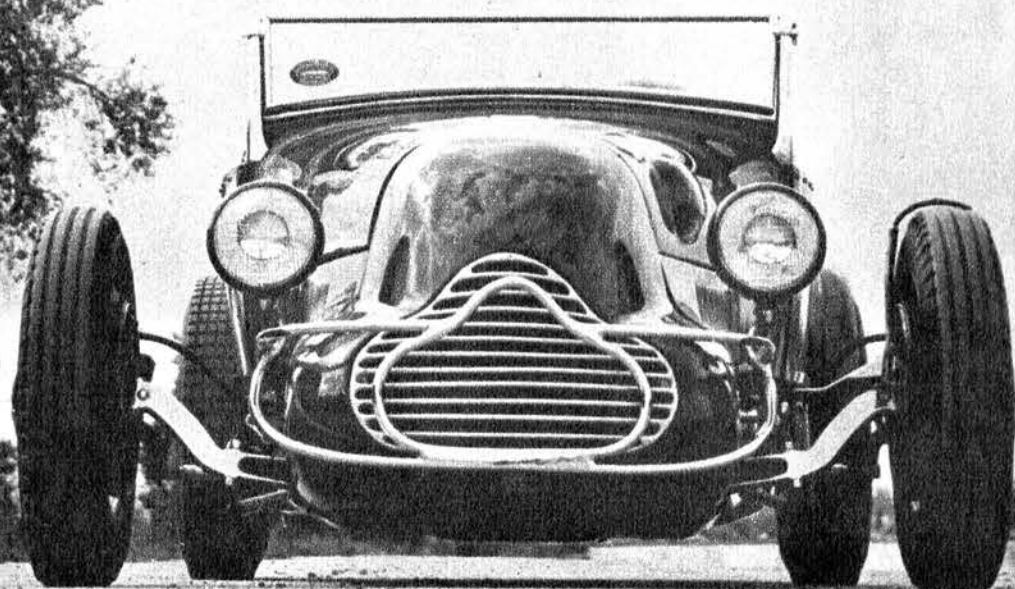
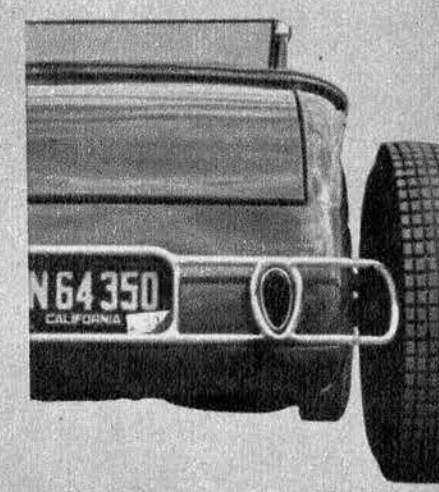
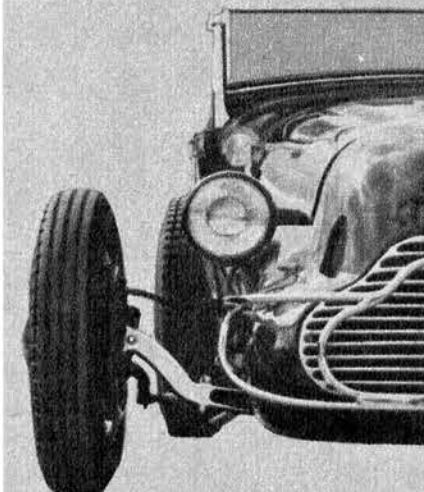


Engine of roadster is built for go and not for beauty as outside of car is.

Detail of chromed rear bumper and license plate mount of the roadster.



Comparison view showing frontal and rear view of roadster at same time.



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NEW OHV ENGINES

(Continued from Page 50)

ing the public a great product. Of all the engines we've balanced (at Ray Brown's) we've been able to improve them very little.

Now if it is felt necessary to increase the size of one of these engines by boring and/or stroking, it will also be necessary to balance all over again the pistons, rods, crankshaft, clutch, and flywheel. This has to be done because when you bore way out and have to go to larger and therefore heavier pistons and pins, you throw off the balance of the whole crankshaft assembly. And it's easy to see that when you stroke a crankshaft, you render its counterweights ineffective. I can't stress strongly enough the importance of static and dynamic balancing if you make these modifications to gain displacement. When you balance an out-of-balance engine you eliminate roughness, get longer engine life, and you eliminate sources of possible mechanical failure due to high speed pounding effects. The job costs \$35 to \$40 for any of the ohv V-8s.

Now let's suppose you've installed a cam, headers, special carbs and distributor on your Chrysler-line V-8, and everything is buttoned up and ready to go. Or is it? No, it isn't—not by any means. We've now come to the last phase and one of the most important phases of all hop up procedure: *final tune up*.

Even though you may have done all your own work up to this point, unless you're an experienced tuneup specialist, you can save time and, probably, money by getting such an expert to make all the necessary adjustments on the road. Shop adjustments are not enough.

Let's take the carburetion for example. If you've installed a quad carb there's no synchronization necessary other than factory-type adjustment. But if you've mounted duals, there's no substitute for real experience in getting both pots to function identically at all times. It's a tricky, difficult thing to learn. It's necessary to seat the butterfly valves in their bases in the carb bodies. It often requires loosening the screws, delicately shifting the butterfly on its rod so that it will seat tightly, so that each valve in each carb will function identically. The linkage between the controls of the two carbs must be adjusted to stay just so and it should stay that way for a long time. This all takes a certain knack—one that only experience can teach.

After you've installed your very desirable, modified ignition system, the timing should be set by means of a timing light aimed at the timing mark on the vibration damper. But that dot

is just a rough guide—an approximation put there at the factory. To be right on the dot doesn't mean that your timing is right on. A good hop up tuneup man tackles the problem this way: He times the engine according to that timing mark. Then he goes out on the road and loads the engine as much as he can, readjusting the timing until the engine just pings slightly at full load. It musn't be a ping just a few times and then, as the revs mount, the pinging should vanish—that's the ideal timing adjustment. It has to be made "by the seat of the pants"—the only correct way.

After 5,000 miles or so on the road that timing mark will have even less meaning because many things like carbon deposits will have happened within the engine to affect how it should be timed correctly. Countless tests on the chassis dynamometer have convinced me that spark adjustment is the most critical of all. Just being a shade off can make a 10 to 20% difference in power output. If you're advanced too far you can drop 30, 40, or 50%. If you are retarded too much you'll drop plenty, but not that much and not that fast. So, after you're all done with the service manuals and the timing light, the best thing to do is go out on the road and make your final adjustments there. Get a good tuneup man. It takes an educated seat of the pants.



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in. These louvers, in case you hadn't noticed in the photos, are punched from the outside in, instead of from the inside out as most louvers are.

The grille was made, by Neil, of round aluminum rod welded together and then after much filing (by Flint) of the joints it was buffed to a high polish, and clear lacquered.

In between working on parts of his engine, (and while Valley was performing the body work) Dick was making the front and rear bumpers, headlight brackets, split wishbones (which incidentally are made from model T wishbones) and other incidentals so necessary to the finish and operation of a roadster.

Dick did almost all the mechanical work on the car himself, including the mounting of the hydraulic brakes from a later model Ford ('46).

A floor shift transmission is used and contains Zephyr gears, while the rear end contains 3.27 to 1 gears. Coupled with 7.00 x 16 tires on the rear, the roadster is just a little radical for town use but is sure fine on the road.

These gears had been installed because of the fact Dick wanted to run lakes, and with the size of the engine ('40 Merc bored to 3 5/16, stroked to 4 1/8) he could well afford to pull the higher gears.

Equipment used on the engine includes an Edelbrock three carburetor manifold, Edelbrock 9 to 1 heads, Winfield SU 1-A cam, and a Flieschmann ignition. Top speed, so far, was 143.54 mph at an SCTA meet while running with the Glendale Sidewinders club.

A So-Cal dropped and filled axle was installed and then after the work on the front end had been completed Dick took it apart to have everything chromium plated.

Axle, tie rod, drag link, wishbones, steering bracket (on left spindle) pitman arm, the nerfing bar type bumpers were all chromed.

The instrument panel is from an Auburn and contains new Stewart Warner instruments with the exception of the speedometer which is original. The new ones are: oil pressure, two water temperature gauges, oil temperature gauge, and outside the center panel are the fuel pressure and the ammeter.

After all the body work had been completed, but before Valley painted the roadster, Dick took it to Floyd Tipton of Burbank to be upholstered. Floyd did the job in brown leatherette, pleated, and made a rug floor mat, also of brown, to go with the upholstery.

Dick is very proud of this little jewel (as well he should be) which we think is one of the finest appearing roadsters on the west coast, and probably the whole United States.

TECHNICAL TIPS

(Continued from Page 61)

called expert having been in Diesel engine design with the above outfit for some time (8 years) and I am an automotive engineer by trade.

I believe you are falsely impressed, at times, by dynamometer tests, etc. Just remember that it is a good deal like a prof. I once had at Cambridge, Mass., said: "It is what you learn after you know it all that counts." What I mean is, no one knows all about these engines, so don't make too many flat statements that cover too broad a field.

One thing I take exception to you and other hot rod experts is, that you give the impression to the uninformed that all engine back pressure should be eliminated for ideal performance. Now this is basically wrong. Here is why: If you have no back pressure, the ex-

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