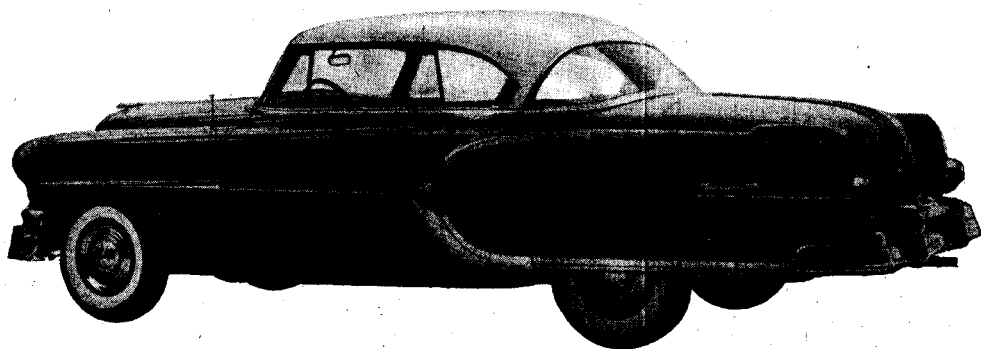


Plush New Pontiac Is Longer and Stronger

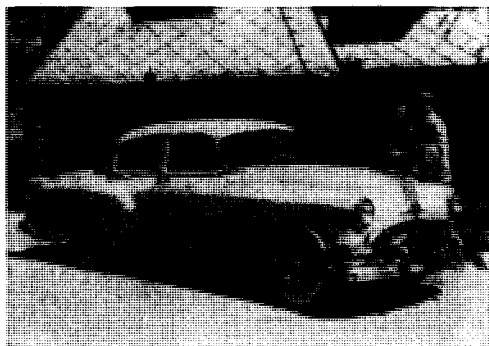


LIFT the deck lid on the '54 Pontiac "Star Chief" and you find a luggage compartment 11 inches longer than on standard Pontiac models. The entire added length of

this newest line in the company's stable of cars has gone into the back end. Three stars on a modified "fishtail" identify it.

Four models are available in the line—a hardtop (above), custom four-door, a fancied-up four-door (left) and a convertible. All have the Pontiac eight-cylinder engine, up from last year's 122 hp. to 127, and Hydra-Matic drives.

As an added attraction, the Star Chief line offers a series of colors not obtainable in other Pontiacs. If you'll look closely you'll find, in addition to the stars on the fenders, a chrome plaque at the rear windows. The wheelbase is 124 inches, two inches longer than that on the regular lines. This is to assure a better distribution of the weight imposed by the longer body.



FACTS ON '54 PONTIAC

Model: Star Chief hardtop.

Engine: 8-cyl. in-line L-head; 127 hp. at 3,800 r.p.m.; compression ratio, 7.7:1; piston displacement, 268.4 cu. in.; piston travel (in feet per car mile at 30 m.p.h.), 1,481; bore and stroke, 3 $\frac{1}{8}$ " by 3 $\frac{1}{8}$ "; torque, 234 lb.-ft. at 2,200 r.p.m.

Weight: 3,500 lb. (approx.); per hp., 27.5 lb.

Transmission: Hydra-Matic; rear-axle ratio, 3.23:1.

Steering ratio: 25.1; radius of turning circle, 22 $\frac{1}{2}$ '.

Effective brake lining area: 171 sq. in.

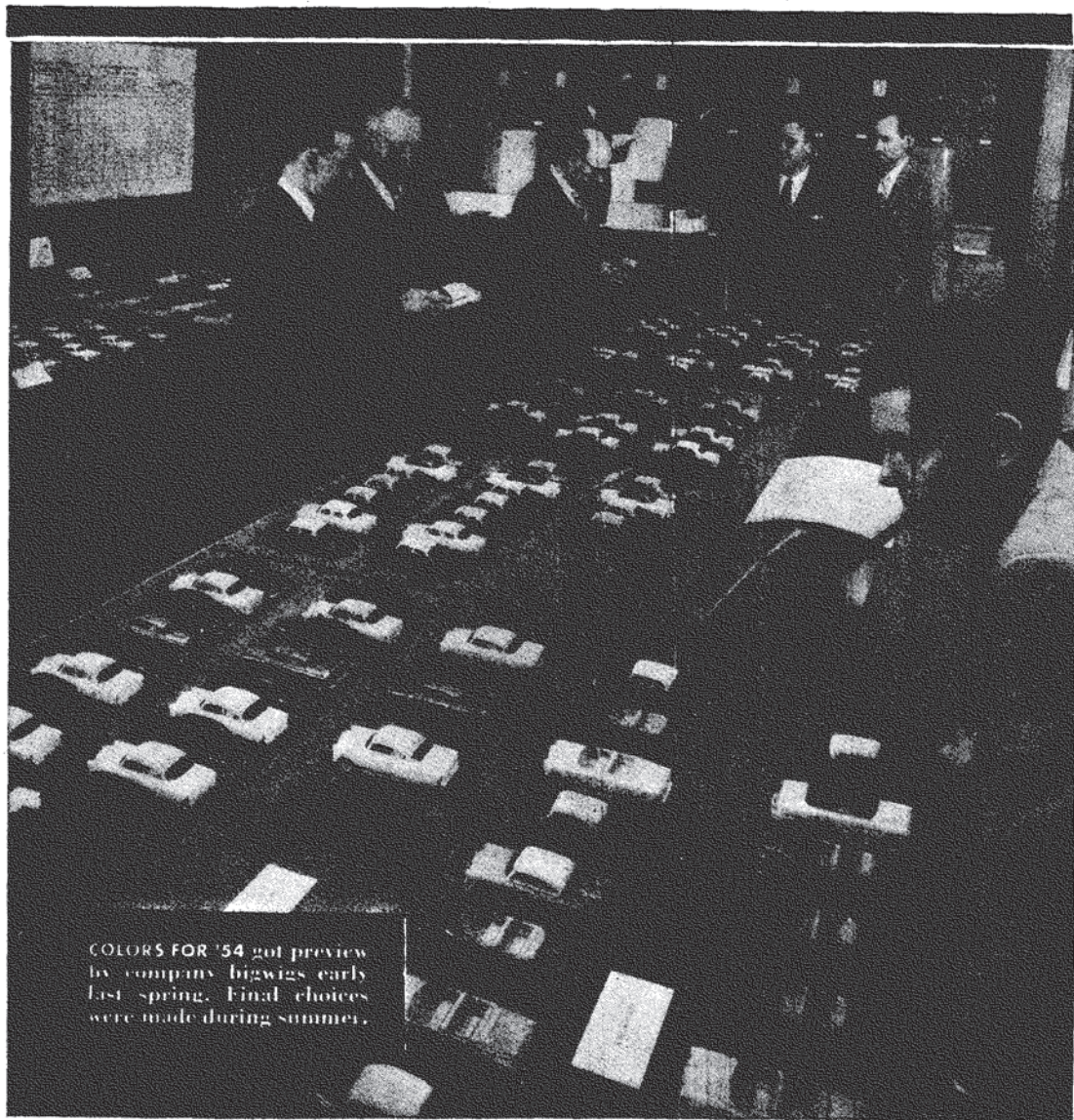
Springs: front, coil; rear, semi-elliptic.

Outside dimensions: height, 63.2"; overall length with bumpers and guards, 213.6"; width, 76.6"; wheelbase, 124"; overhang, front 34.5", rear 55.1"; tread, front 58.5", rear 59".

Inside dimensions: seat cushion width, front 59.8", rear 60.7"; leg room, front 42.8", rear 42.6"; headroom, front 38", rear 35.5"; seat height, front 13.8", rear 12.5"; vertical distance, steering wheel to seat cushion with seat in mid-position, 5.2"; front seat adjustment, horizontal 4.5", vertical 1.7".

Tire size: 7.10 by 15.

This Year You Can Buy
161 Chevrolets
...All Different



COLORS FOR '54 got preview
by company bigwigs early
last spring. Final choices
were made during summer.

*And here's the arithmetic
on your varied choices:*

CHEVY ARRIVES at figure of 161 different-looking cars for 1954 by multiplying colors available by models in each line or "series." In solid colors, for instance, 210 series has two models available in 10 colors plus one model in six colors and one model in three colors—total 29. Adding solid colors and two-tones gives grand total of 161.

*Want a distinctive-looking automobile? Now you
can get it—right off a standard production line.*

By Devon Francis

A MAN in Missouri wrote a letter the other day to the people who make Chevrolets with an idea that he thought was a dandy. Why not, he said, name one of the colors to be offered to the public in the 1954 crop of cars after a dear old lady, his maiden aunt? They could call it Agnes Pink.

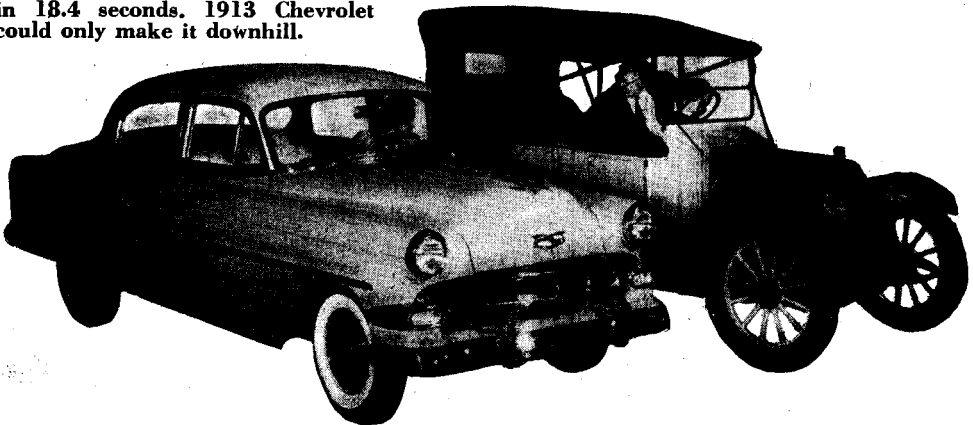
As all big corporations do in such circumstances, Chevrolet replied gravely on starched stationery that the idea had profound merit but didn't quite fit in with its plans. Moreover—and here the company thanked its lucky stars for a

convenient escape hatch—it wouldn't be making any pink cars.

It's making them in just about every other color and hue, though. After the new Chevrolets were announced last December, they totted up the number of choices in models, colors, hues and two-tone combinations that the buyer could get on the salesroom floor. It came to, 161.

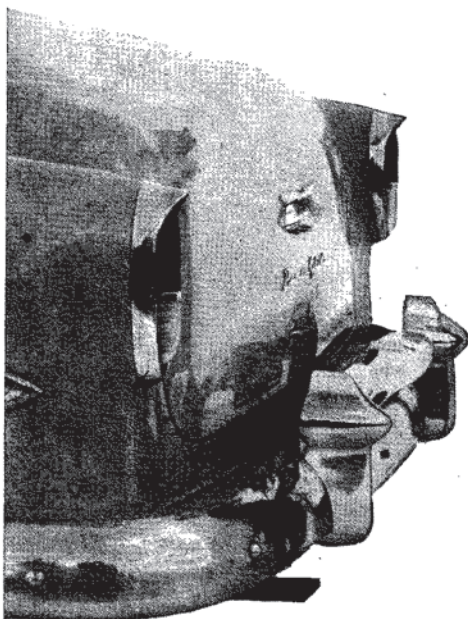
For 1954, Chevrolet—which makes and sells more cars than anybody else on earth—is offering green cars, blue cars, beige cars, brown cars, gray cars, red cars, turquoise cars, cream cars, tan cars and some in-between hues. You can even

'54 POWERGLIDE Bel Air can hit 60 in 18.4 seconds. 1913 Chevrolet could only make it downhill.



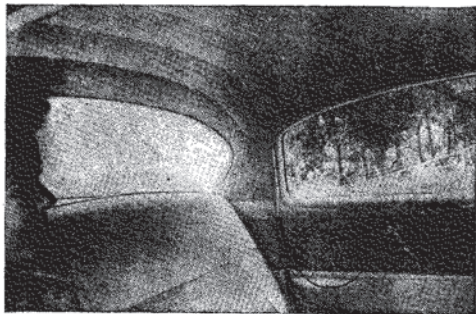


NEW HORN-RIM CAPS to match steering-wheel colors help spruce up interiors. Electric seat and window lifts are optional.



EYEBROWS on the tail lights are a '54 recognition feature. There's a new low-back-pressure muffler on all but convertibles.

FABRICS on seats and sidewalls and trim are richer. In Bel Air models cloths, combined with vinyls, are faced with nylon.



buy black cars. You can buy cars with ivory tops and turquoise bodies, beige tops and green bodies, and red tops with beige bodies.

You can buy a beige top with a red body and a silver wheel-stripe garnished with a maroon-and-beige trim. And when the man on the salesroom floor, showing all his teeth, gently tries to shoo you off an ivory-blue-silver-gray combination with an onyx-black treatment of the instrument panel, garnish moldings, lock buttons and steering-wheel rim and cap, on the plea that they don't make them that way, just say, "Better read your own sales literature, bub."

You can carry the differences a lot further than 161 Chevrolets for 1954. If you count in the number of variables possible in such factory-installed items as transmissions, brakes, steering and rear-axle ratios, the number of different cars gets to be astronomical. For a single model of a single line of Chevrolets this year—and there are 13 models in three lines in all—the figure is upward of 40,000.

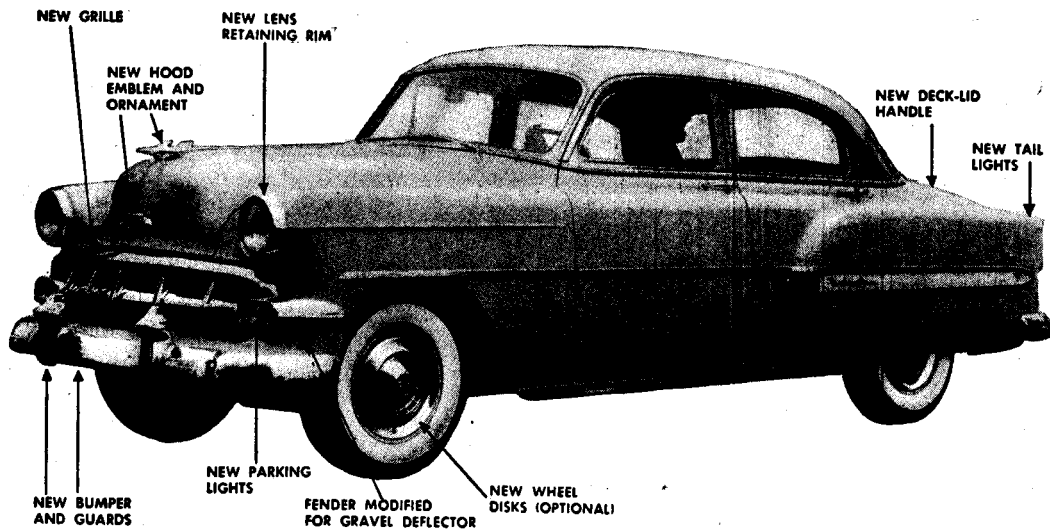
No Two Oshkoshers Would Have Same Car

That means that every man, woman and child in a city the size of Oshkosh, Wis., could each buy, say, a four-door sedan of Chevrolet's middle or 210 line, and no two of them would be exactly alike.

And this, bear in mind, does *not* count the multitude of possible variations with such dealer-installed accessories as radios, heaters, backup lights, seat covers and hare tails on the fender antenna.

The rash of colors in U. S. automobiles is relatively new. You could get colors long before World War II in fair variety, but the real profusion began only a couple of years ago. Gradually, color has come to share the emphasis put on the galloping horses in the new engines, automatic transmissions, power steering and air conditioning. The reason, of course, is that automobile owners want to be different.

Color variety in automobiles spawns



DETROIT LINGO for model changes made without replacing costly body dies, a "face lift" can add up to a big difference in looks. Not shown here is Chevy's mechanical news

for '54: the standard engine goes from 108 to 115 hp., Powerglide job from 115 to 125. A high-lift cast-iron cam does trick, helps performance in middle, upper ranges.

endless stories in the cloakrooms of Detroit's factories. One of them is the Case of the Frightened Female. It seems that Chevy turned out 7,700-odd cars last year of a special color, one for each of its dealers. The cars weren't offered for public sale. These cars were strictly show jobs. Some of the dealers, nonetheless, disposed of the cars to customers. One fell into the hands of a matron who scared easily.

One day, out driving, she noticed a car following her. At its wheel was a man. Every time she turned, the man turned. She drove around the block. The man followed. Desperate, she pulled up beside a cop.

"That man's following me," she reported.

The cop stalked back to interview the suspected driver. He returned in a moment grinning. "The guy in that car," he reported, "says this here color car you got is a dealer's car. He's a Ford salesman and he's following you around to see where you stop so he can spot your sales prospects."

The most striking change in the public's taste in automobile colors is the growing popularity of the pastels—a light tan, for instance, in preference to a

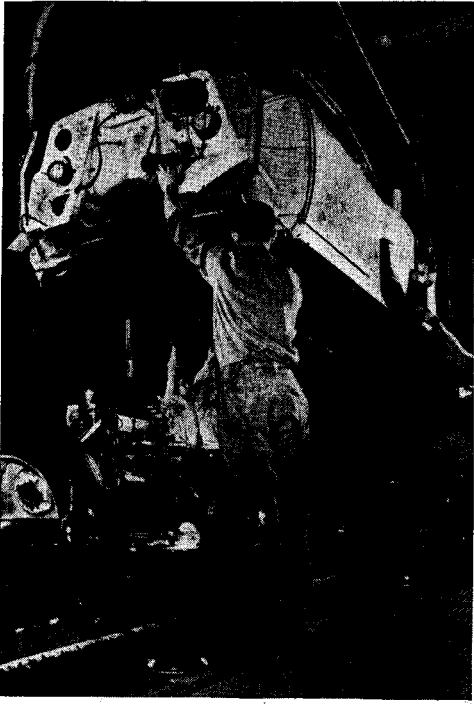
brown. Yet, with 22 colors and hues to choose from, car buyers—reports Du Pont, one of the suppliers of finishes to the industry—chose only five in bulk. They were light green (by far the most popular), light blue, dark green, light gray and black, in that order of preference. Clear down on the list were blue-green, maroon, light red, light brown, medium red, medium gray, tan and dark red.

If you want a genuine oddity, buy a white car. Hardly anybody orders one. Better yet, buy a reddish mustard. *No-body* wants that.

Bright Hues Go with Good Times

The Chevrolet people, wading around in oceans of statistics, report other quirks in the public's tastes. The evidence tends to indicate that in good times people buy snappy colors and in bad times the mood is for somber ones. Year to year, the northeastern states order the darker colors while Florida, the entire West Coast and the southwestern states like the lighter ones. In the Midwest it's 50-50.

Color in automobiles first began to tickle the buyer's fancy in the mid-Twenties—not long after Henry Ford, rid-



BODY DROP on production line dramatizes incredible scheduling job in making 161 combinations of body and color. Magically, the right wheels, body, chassis always meet.

ing a crest of popularity, fliply told a dealers' convention: "Gentlemen, you can have any color you want, so long as it's black." He lived to see his cars light up like pinball machines.

Color was becoming a definite factor in buyer preference by 1926. The new pyroxylin finishes, a guarantee against

peeling, had been introduced. Manufacturers began leavening their traditional black with other colors. A decade later Edgar A. Guest, the newspaper poet, was writing:

When I was but a little lad
Few were the colors that we had
Then red was red and blue was blue,
And that was all we ever knew;
But since they have made the motor car
Behold how many shades there are!

That year, by the way, Eddie Guest himself was driving a two-tone Cadillac finished with what Du Pont, in an excess of ecstasy, called Piccadilly Brown and London Smoke.

But far more black cars were sold than any other. Today black accounts for less than one-tenth of the entire market.

Gimmicks and Color Vie for Attention

Exactly 20 years ago Chevrolet made 11 models in two lines, in seven solid, darkish colors, including black.

As late as 1941 Chevrolet was offering a choice of pretty somber colors—13 of them—in all its models. Three more colors were available only in three specific models. One pastel turned up. Black predominated. But the two-tone idea had taken root. There were four of those in the catalogue.

Now the latest mechanical gimmicks have to compete with color for the buyer's attention. They must also compete

FACTS ON '54 CHEVROLET

Model: 210 series four-door sedan.

Engine: 6-cyl. with overhead valves; 115 hp. at 3,700 r.p.m.; compression ratio, 7.5:1; piston displacement, 235.5 cu. in.; piston travel (in feet per car mile at 20 m.p.h.), 1,816.5; bore and stroke, 3 9/16" by 3 15/16"; crankshaft bearing surface, 29.37 sq. in.; torque, 200 lb.-ft. at 2,000 r.p.m.

Performance weight: (curb weight plus 600 lb.) 3,960 lb.; per hp., 34.43.

Transmission: Three-speed synchromesh (optional Powerglide torque converter with 125-hp. engine).

Steering ratio: 23.1:1 manual; 22.1:1 power; radius of turning circle, 19'.

Effective brake-lining area: 158 sq. in.
Springs: front, coil; rear, semi-elliptic.

Outside dimensions: height, 63 3/4" at design load; over-all length with bumpers and guards, 196.44"; width, 75"; wheelbase, 115"; overhang, front, 33", rear, 48.44"; tread, front 56.70", rear 58.77".

Inside dimensions: seat-cushion width, front 59.9", rear 60.5"; leg room, front 42.7", rear 41.4"; seat height, front 13.5", rear 12.6"; vertical distance, steering wheel to seat cushion with seat in mid-position, 4.4"; front-seat horizontal adjustment, 4.4".

Tire size: 6.70 by 15.

with *chi-chi* models like hardtops and with various lines or "series." As among the brands, decision has to be made on the kind of fishtails on the rear fenders and wind-splits on the front ones. The number of choices that has to be made before the money and the car change hands is getting so huge that the emotionally unstable buyer had best stay out on the sidewalk, point through the window and settle it by saying, "Gimme that one."

Sorry, No Agnes Pink

Chevrolet won't be making any Agnes Pink automobiles in 1954. It won't even change its basic sheet metal from 1953. But the cars will get away from a light faster and—a point vital to the fellow who is fiddling with the notion of buying a new car—they will look different.

Engine power is up. Compression ratio is up. A new camshaft has been installed. Power plants are quieter. Carburetors are changed for smoother acceleration.

There's a new muffler and nylon inserts for the rear springs, eliminating the need for spring covers and for lubrication.

Power brakes will also be available for 1954. They are the low-pedal type, made by Bendix.

You Pays Your Money . . .

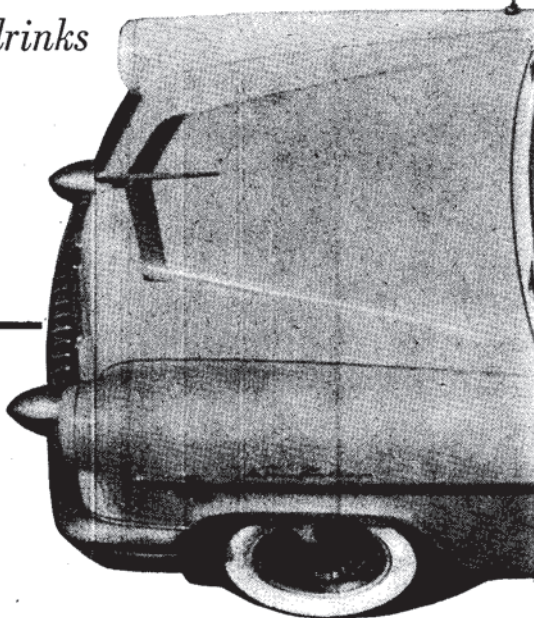
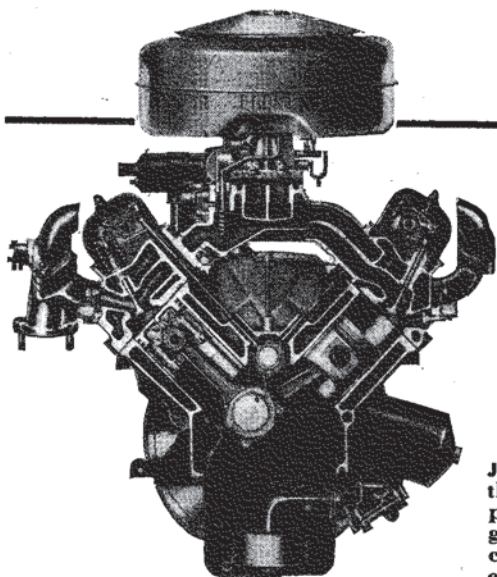
And colors! Nine of the 14 exterior colors are spanking new. So go down to the showrobm and make your choices: Solid color? Two-tone? Hardtop? Sedan? Station wagon? What line, the Bel Air? What transmission, a standard or automatic? What tires, plain or whitewall? Want power steering? An electric front-seat adjustment? Automatic window lifts? Wheel covers? Turn signals? Backup lights? Or perhaps a station-seeking radio?

On second thought, you'd better make out a check list and sit down and talk it over with the little woman. It will save you trouble.

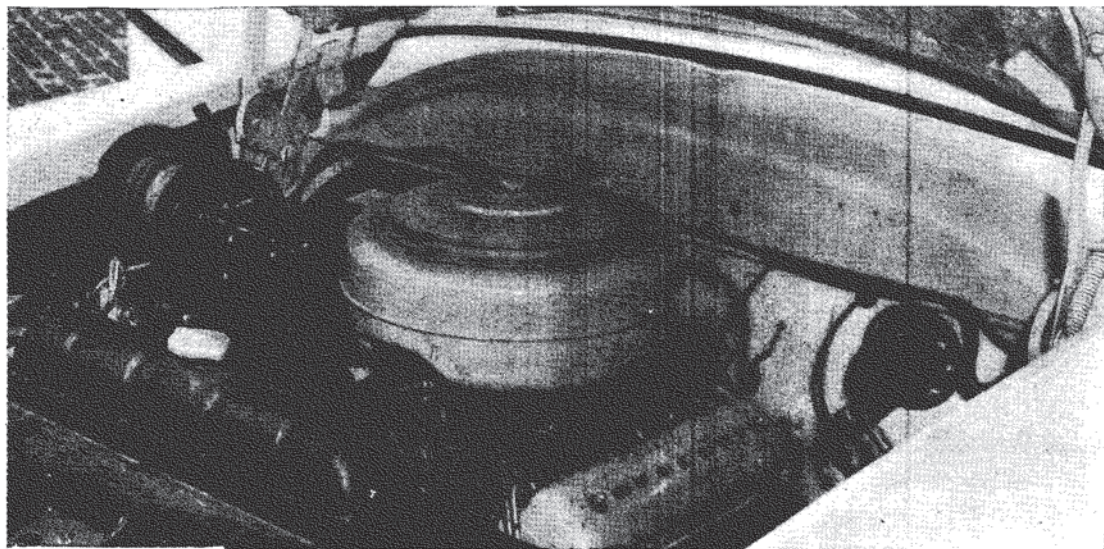
Mercury Brings Out

Its first new power plant in 15 years has a 161-hp. push, but drinks no more gas than before.

By Wilbur Shaw



JAUNTY, WOT? Above is Sun. Valley model of the 1954 Mercury line, with a tinted, half-plastic top. At left is a cutaway of the new engine that produces .628 horsepower for every cubic inch of displacement. Photo below shows engine, with its extraordinary carburetor, in car.



Valve-in-Head Engine



THREE years ago a Mercury engineer told me that the men in his department would never be satisfied until they designed an engine that ate up a lot less of its own power than the ones then on the production line:

Well, they've done it.

I was introduced the other day to the newest member of the Ford Motor Company's family of engines. It's the overhead-valve Mercury power plant for 1954, with 161 horsepower.

This isn't an engine that will beat everything else away from a light. It wasn't built for that. It was built for expending less energy on its own friction and more on push at the rear wheels.

Mercury's first new engine in 15 years, replacing the old L-head V-8, is a "family" engine because it adheres strictly to tested Ford Motor Company design. Announced recently it's conventional in appearance, with a short stroke and a

high-turbulence head. It contains no tricky curlicues.

But look what it does:

In the old engine, the sheer friction forces inside of it ate up almost a third of the power it produced. In the new engine, more than four-fifths of the power produced goes out the back end of the crankshaft to the transmission.

In the old engine each piston shuttled back and forth in its cylinder for 21 miles for each 100 miles on the road. With the new one, the same amount of piston travel will drive the car 129 miles.

Piston travel causes wear. It also costs gasoline.

Engine Gets 36 More Horses

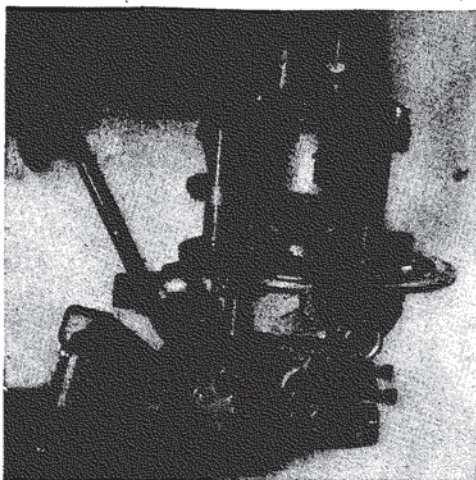
The old engine had 125 horsepower. The new one, at 161 hp., uses no more fuel than the power plant it replaces.

Don't underrate the acceleration performance, either. Last year's Mercury

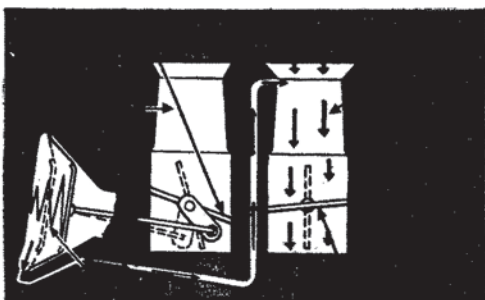


WITH THE POWER BRAKES—introduced in mid-1953—the pedal travel is reduced from 6½

to 3½ inches. With power steering, parking requires only seven to 10 pounds' rim-pull.



THE HEART of the new carburetor is this linkage to the auxiliary barrels, operated by the diaphragm to the left of the pencil. The float bowl sits on heat-insulating stilts.



THE ACCELERATOR PEDAL opens and closes only two of the carburetor's four butterfly valves. Vacuum controls the others. Sketch above shows how it's piped to the diaphragm.

took 52 seconds to reach 80 miles an hour. This year's car: 34 seconds. Perhaps more important to safety on the highway, this year's car is five car-lengths ahead of the old one at 80 miles an hour when the automatic transmission is "kicked down" at 50 m.p.h. for passing.

More than the new engine has gone into the 1954 Mercury. A new carburetor is high on the list of improvements.

When I drove the car on the evergreen-screened Ford test track in Dearborn, Mich., and again on the Indianapolis Motor Speedway, I was struck by the smoothness of the power pickup as the accelerator went down. There was no transition point, no momentary flutter, no lurch as the car gained speed. The reason for it is the way the butterfly valves are opened in response to the demand for more torque at the rear wheels.

Engine Vacuum Opens Butterflies

In four-barrel carburetors (see diagram at the left) a means has to be provided for opening the secondary barrels when the engine needs more fuel. Some companies do it mechanically. Others do it with an air stream, induced by engine vacuum, that overcomes the pull of little counterweights on the butterflies.

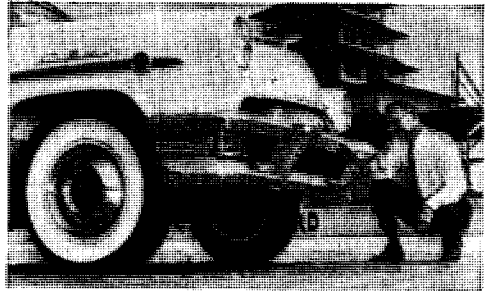
Mercury uses engine vacuum, too, but in a different way.

As the butterflies on the two primary

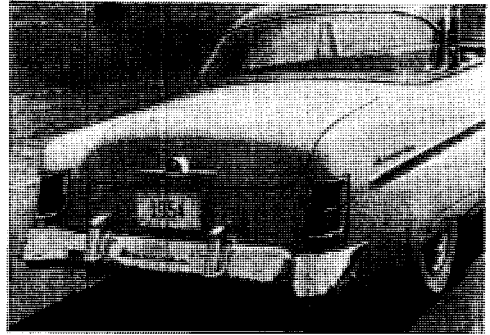
barrels are opened by linkage from the accelerator, engine vacuum reaches up into the carburetor for more air. The vacuum relieves the air pressure on one side of a little spring-loaded diaphragm, auxiliary to the carburetor. In turn, this opens the butterflies on the two secondary barrels. When the vacuum drops, the butterflies close.

It's a neat way of tailoring the fuel supply precisely to the engine's needs—and it's a gas saver.

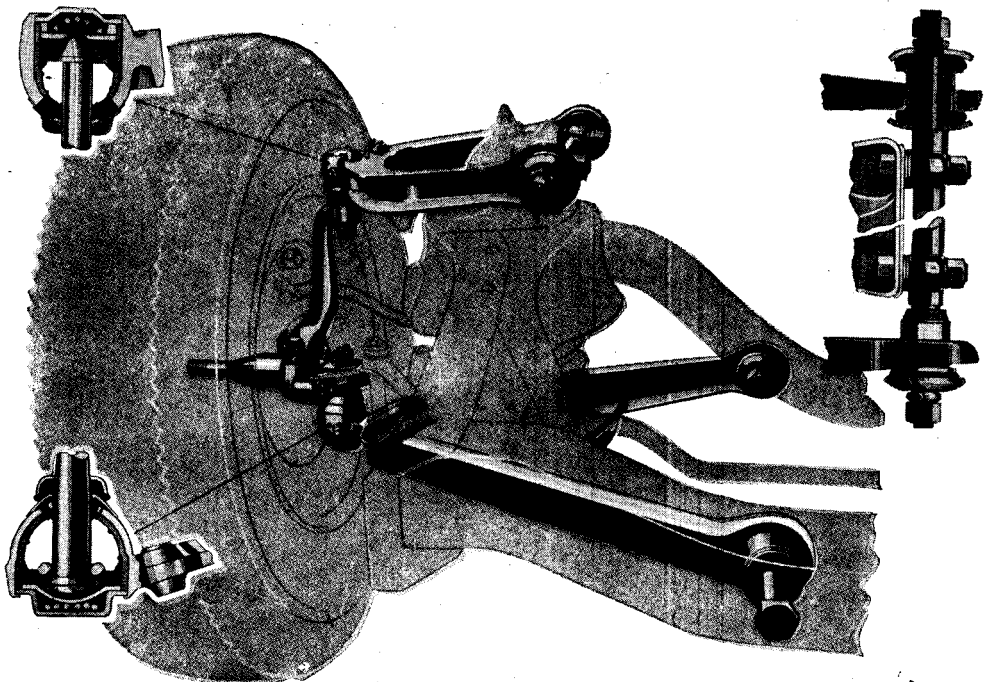
To tell the full truth, at low car speed the new carburetor will do more for the motorist with a manual transmission than for the man with automatic drive. To get a proper mixture, you've got to have a good air flow. For a good air flow, your engine has to rev up and pump faster. With Mercury's automatic transmission, the slippage at low car speed and hard throttle lets the engine rev up instantaneously. But when you hit the accelerator at low speed in a gearshift job, the straight-through mechanical connection between the engine and rear wheels holds down the r.p.m. and the air flow



BUMPERETTES ARE CANTED. Supported by not one, but two, horizontal members, they're designed to ride up on the rear bumper of the car ahead instead of locking.



SOME STYLING SLEIGHT OF HAND is evident here. The rear end of the '54 Mercury isn't any lower. It just looks that way. Over-all length is up 1½ inches and car is lighter.



THE NEW SUSPENSION uses a single forging, for upper and lower ball joints, in place of

the kingpin, spindle and spindle support. This advances oil pan for better cooling.



LINES OF THE NEW JOB are good. It had 600,000 miles of road test before introduction. In background you can see Indianapolis Speedway's new steel grandstand "A."



THE CAR WILL TOP 60 with an automatic transmission in 18 seconds, compared with 21 in '53. Behind it is the spot where I went over the wall in the 500-mile race in 1931.

—with the ordinary carburetor—until the car gradually picks up speed.

There's another little convenience built into this carburetor. If you stop at a roadside stand on a hot day you may have trouble getting your engine started again. That's because raw gas has boiled out of the float bowl into the manifold.

The '54 Mercury solves that one by putting an overflow tube on the bowl so the gas can boil away to the outside air.

The new engine is lower in the chassis—a by-product of a new front suspension. Mercury has the first ball-joint mountings for the front wheels in the medium-price field.

With ball joints you throw away the conventional spindles and kingpins. The ball joints are self-aligning. Up-and-down wheel travel is increased for a softer ride.

Ball joints wear less. They reduce the

steering effort. And instead of 16 places on the front suspension where your service-station man had to reach with a grease gun, now there are only four, exclusive of the tie rods. Everything else either is in rubber or is factory-lubricated.

Since the ball joints let the designers put the suspension-arm outer pivots closer to the wheel, the upper-arm inner pivots could be moved outboard. That increased the space in the engine compartment. So they lowered the engine.

Mercury will continue to offer power steering and power brakes and, for '54, air conditioning. They're also offering a model with a top that's half glass.

When the industry began manufacturing cars without center posts in 1950, they called them "hardtop convertibles." What will they call this new one—a transparent convertible?

FACTS ON '54 MERCURY

Model: Sun Valley hardtop.

Engine: V-8 valve-in-head; 161 hp. at 4,400 r.p.m.; compression ratio, 7.5:1; piston displacement, 256 cu. in.; piston travel (in feet per car mile at 20 m.p.h.), 1,380; bore and stroke, 3" by 3 7/64"; crankshaft bearing surface, 35.91 sq. in.; torque, 238 lb.-ft. at 2,200 to 2,800 r.p.m.

Weight: 3,434 lb. (approx.); per hp., 21.3 lb.

Transmission: Merc-O-Matic torque converter; rear-axle ratio; 3.54:1.

Steering ratio: 25.4:1; radius of turning circle, 20'.

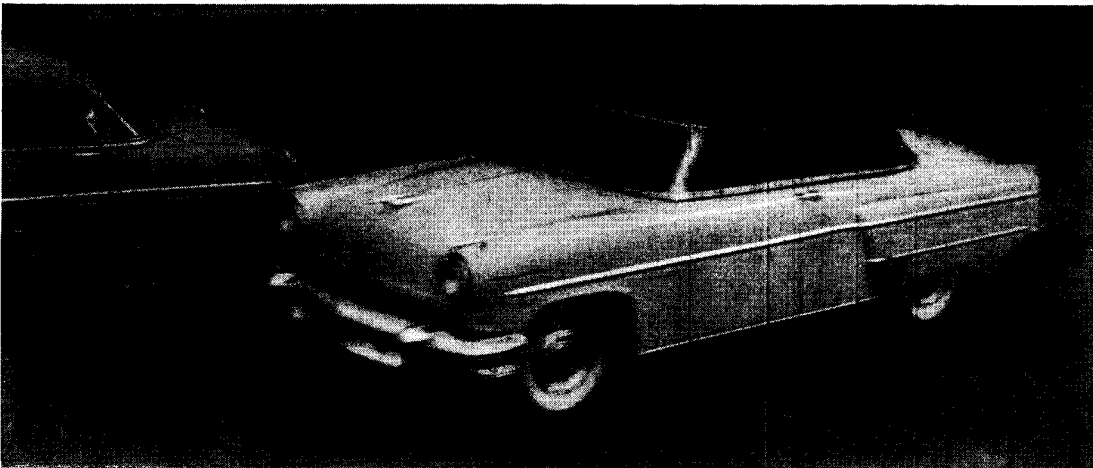
Effective brake-lining area: 159 sq. in.

Springs: front, coil; rear, semi-elliptic.

Outside dimensions: height, 60"; over-all length with bumpers and guards, 206 13/64"; width, 74 13/32"; wheelbase, 118"; overhang, front 36 45/64", rear 51 1/2"; tread, front 58", rear 56".

Inside dimensions: seat-cushion width, front 58 29/32", rear 48"; leg room, front 42 13/16", rear 38"; headroom, front 35 13/32", rear 34 13/64"; seat height, front 13", rear 13"; vertical distance, steering wheel to seat cushion with seat in rear position, 5"; front-seat adjustment, horizontal 4", vertical 2 1/2".

Tire size: 7.10 by 15.



Lincoln Tones Up Performance for '54

ONE of America's fine cars may slip through the year-end fanfare of 1954 announcements with only a passing mention. There will be a good reason: amid a general boost in horsepowers, it has exactly the same as it had in '53.

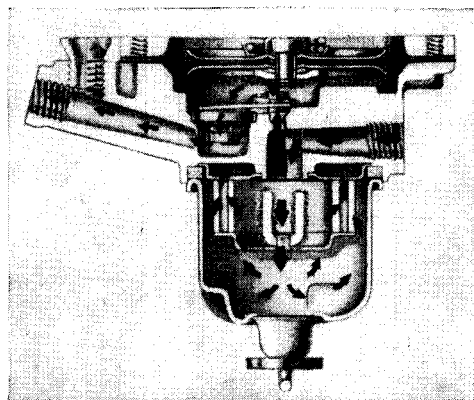
The Lincoln, a "sleeper," as they say out of the corners of their mouths at the pari-mutuel machines, still has 205 horsepower. It still rates among the best cars in low weight-per-horsepower. This year the designers have concentrated on making it a smoother automobile.

"You can put in a lot more power," ex-

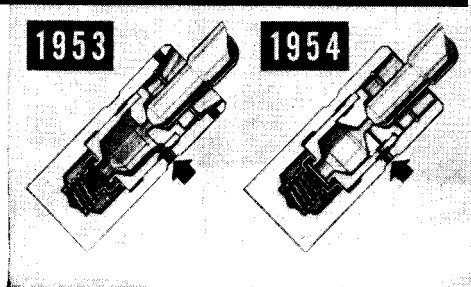
plained a Lincoln engineer, "or you can refine what you've got. You can't do both in the same year."

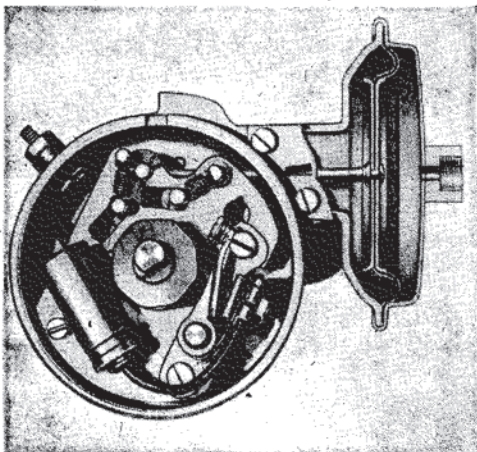
Changes have been made. The brakes

MAGNET in fuel pump keeps small metal particles from reaching and scoring engine. Combined with filter in fuel tank, it insures longer piston and cylinder life.



HIGHER OIL LEVEL in reservoirs of hydraulic tappets eliminates clicking noises when engine is cold. Note height of tappet inlet hole for '54 compared with '53 (arrows).





BOOST IN SIZE of vacuum diaphragm that responds to intake manifold pressure improves spark timing. Supplementing mechanical linkage, it gives big advance for take-off.

are bigger. At 50 miles an hour the car can be stopped in six and a half car-lengths less than last year for any given pedal pressure. At 70, it's eight car-lengths less.

Like the Mercury (see p. 152), the Lincoln has an improved four-barrel carburetor. The spark advance has been attuned more precisely to the demand for push at the rear wheels. A sediment filter, good for the life of the car, is installed in the gas tank. A magnet in the fuel pump picks up any microscopic bits of metal before they can reach the engine.

The carburetor linkage has been al-

tered for smoother acceleration. The engine mounts are changed so that engine vibration won't set up sympathetic rattling in other parts of the car.

That's a tidy design feat in itself. Mountings must offset vibration at 400 to 425 r. p. m. That's the minimum number of revolutions permissible to take care of engine cooling, power steering, the transmission pump, generator output and even air conditioning.

The immediate predecessor of this engine, by the way, finished one-two-three-four in the 1952 Mexican Road Race and was first in its class in the 1953 Mobilgas Economy Run.

Reinforcements make the front-end sheet metal and the steering column more rigid on bumpy roads. The ball-joint suspension on the front wheels has been touched up.

The Lincoln continues to understeer. The company believes that a car should be built so that it has to be held in a turn. It considers oversteer—the anxiety of the front wheels to lead into a turn with only light steering-wheel pressure—dangerous.

For '54 the performance remains excellent. In Drive 3 Hydra-Matic position, it accelerates from a standing start to 60 miles an hour in 12.8 seconds. It will go from zero to 80 in Drive 3 in 21.6 seconds, and in Drive 4 in 22.9 seconds. For passing, it accelerates from 50 to 70 miles an hour in 8.6 seconds.

FACTS ON '54 LINCOLN

Model: Lincoln convertible.

Engine: V-8 overhead valve; 205 hp. at 4,000 r.p.m.; compression ratio, 8:1; piston displacement, 317.5 cu. in.; piston travel (in feet per car mile at 20 m.p.h.), 1,379; bore and stroke, 3.8" by 3.5"; crankshaft bearing surface, 43.49 sq. in.; torque, 305 lb.-ft. at 2,300-3,000 r.p.m.

Weight: (shipping) 4,310 lb.; per hp., 21 lb.

Transmission: Hydra-Matic; rear-axle ratio, 3.31:1.

Steering ratio: 26:1 manual; 21.3:1 power; radius of turning circle, 22.7'.

Effective brake-lining area: 220 sq. in.

Springs: front, ball-joint individual coil; rear, semi-elliptic.

Outside dimensions: over-all height, 63.1"; over-all length with bumpers and guards, 214.8"; width, 77.4"; wheelbase, 123"; overhang, front 37.5"; rear 54.3"; tread, front and rear, 58.5".

Inside dimensions: seat-cushion width, front 62.3", rear 59.7"; leg room, front 44.3", rear 38.1"; seat height, front 13.5", rear 12.5"; vertical distance, steering wheel to seat cushion with seat in mid-position, 4.9"; front-seat adjustment (power), horizontal 4.3", vertical 1.5".

Tire size: 8.20 by 15.