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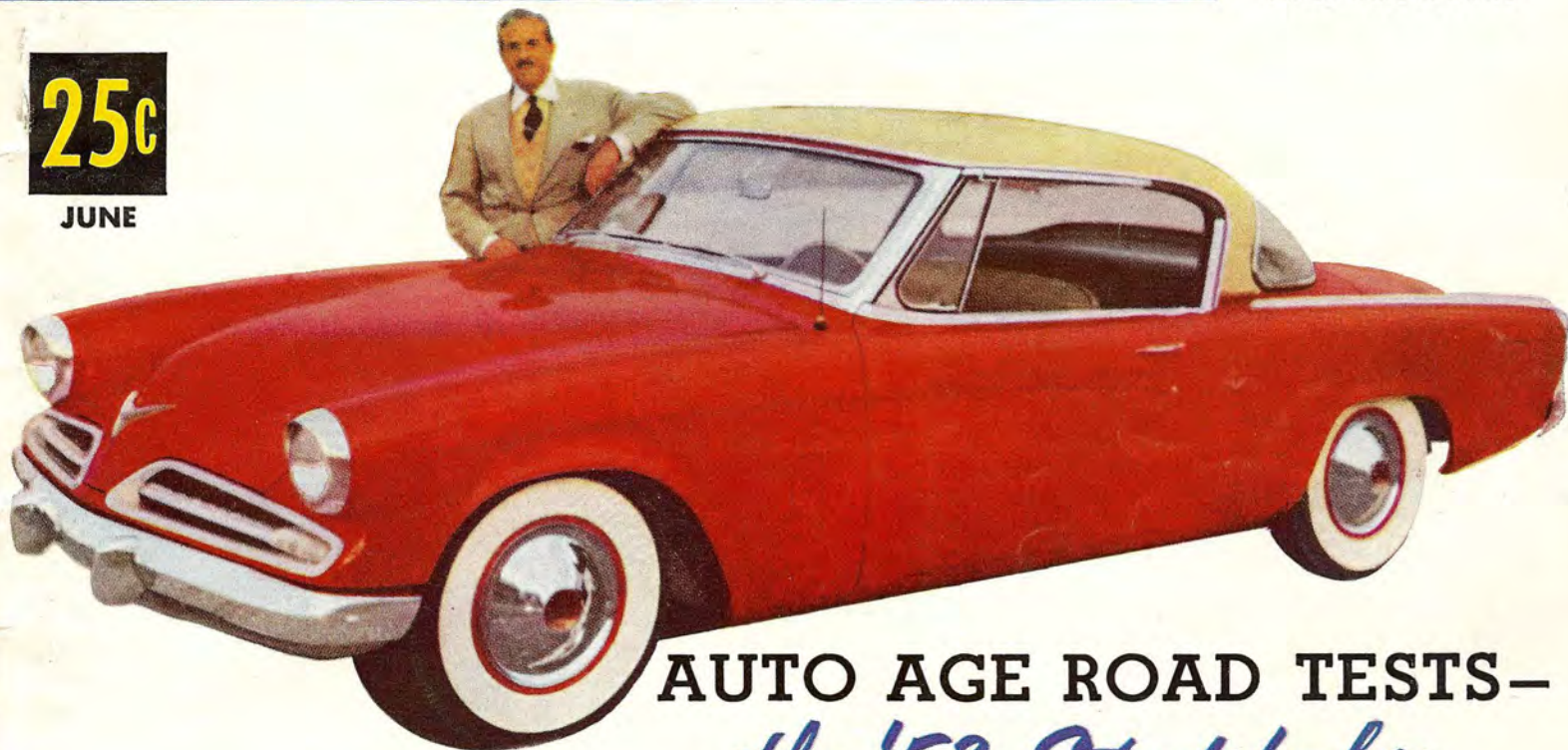
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JUNE



AUTO AGE ROAD TESTS—
the '53 Studebaker

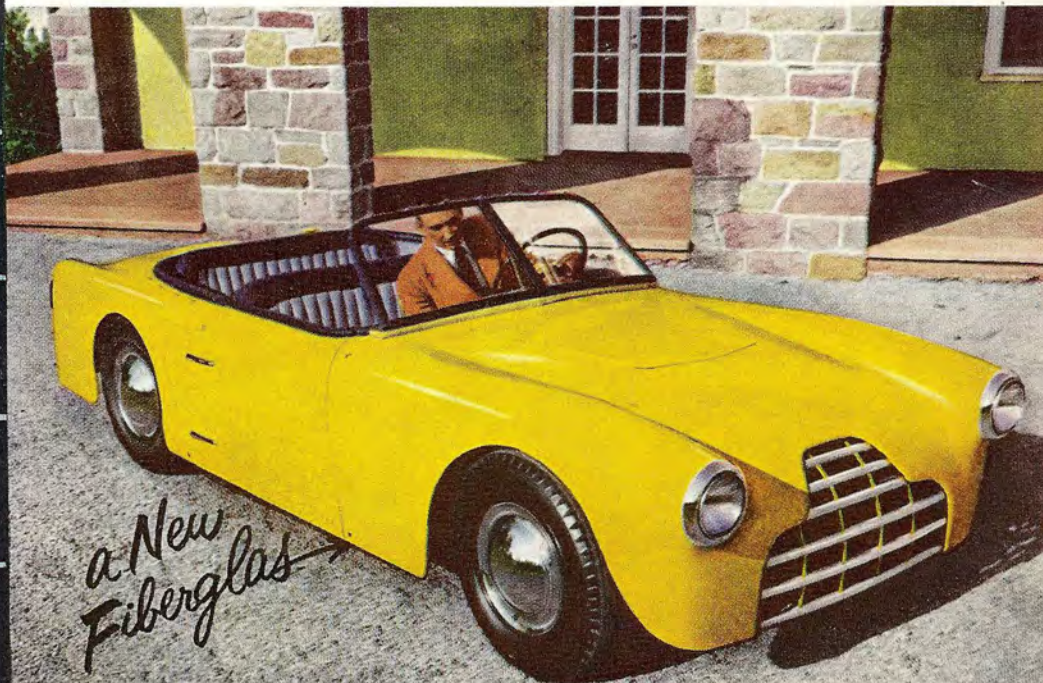
FRANK DEL ROY ON ENGINE TROUBLES

AUTOMATIC TRANSMISSIONS FOR 1953

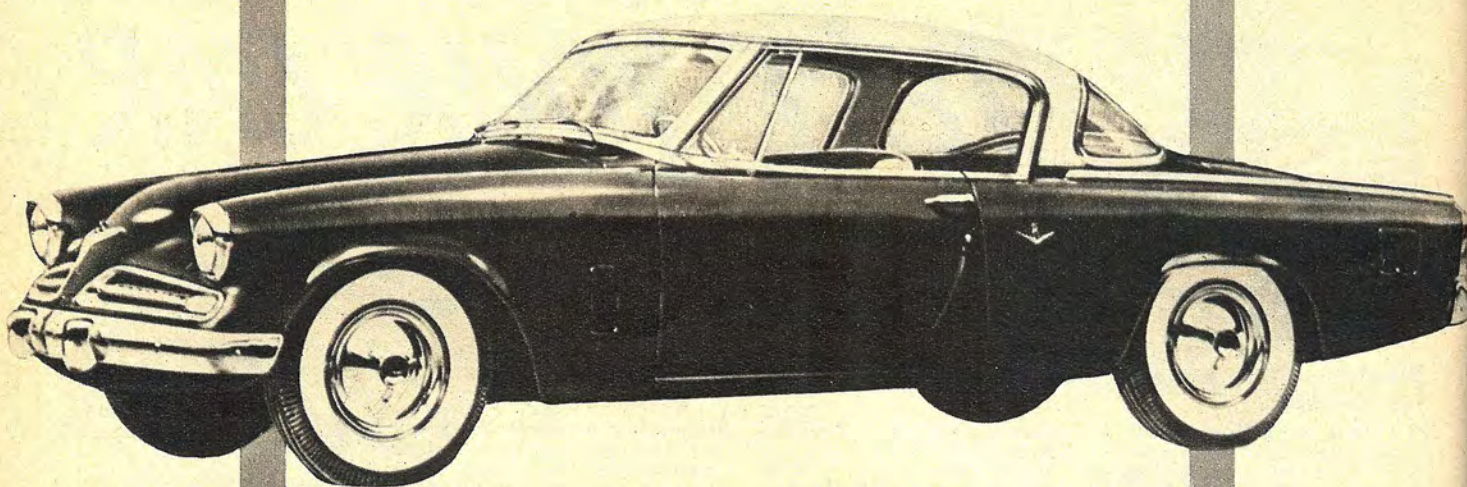
BAKED ENAMEL OR LACQUER SPRAY?

ALL ABOUT WHEEL ALIGNMENT

ANALYZING THE SMUGGLED POBEDA



*a New
Fiberglass*



ROAD TESTING the
'53 STUDEBAKER
Commander V-8



The writer's wife corners the LANDCRUISER hard at 20 mph.



Studebaker's Ed Reynolds (right), in charge of analyzing tests.



THEY'VE *hoosiered* up a dilly out South Bend, Indiana way, believe me. Not only has Studebaker given the new '53 models a completely new body design by Raymond Loewy, but the world's fourth largest manufacturer of motor vehicles is also planning an assault on the rising new market created by the so called "sports car craze."

We visited Studebaker's headquarters at South Bend January 29th. Bob Walton and Ted Berchtold of the public relations office turned us over to Ed Reynolds who is in charge of test analyzing at the proving grounds. After a quick tour of the two and one-half mile track and the rough and hilly section where they try their best to break the backs of new models, we were introduced to a new *Commander* V8 five passenger Coupe. This job, a test model without floor mats and without the rear seat installed, was exactly like the new production cars we saw later coming off the assembly lines. The engine was the now familiar 120 horsepower ohv V8 with 7.0 to 1.0 compression ratio (optionally 7.5 to 1.0 heads are available). A couple of fifty pound shot filled canvas bags brought the Coupe up to production version weight. So the car, though many of the body panels were hand made, could be considered the equivalent of stock models.

The speedometer showed slightly more than 25,000 miles. Asked if this was correct, Ed Reynolds assured me that this was true, and "as a matter of fact, Joe," Ed continued, "this engine has had no other attention throughout the test program other than occasional tune-

With a completely new design, Studebaker does it again—

ups and new spark-plugs when necessary." In other words, our runs over the Studebaker proving grounds were to be in a thoroughly broken-in car.

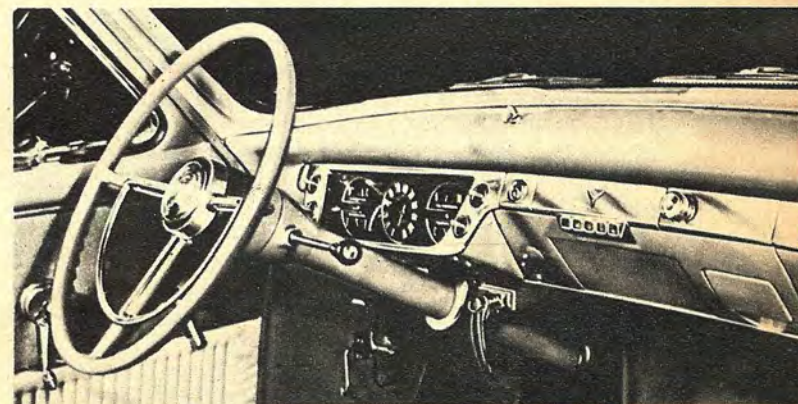
Appearance-wise, the '53 Studebakers are striking—they may well duplicate the customer winning success of the 1947 design, also by Loewy. Comics had fun with that one, you will remember, but this time there should be few jokes. Studebaker is admittedly making a try for the sports car fans with the new *Hardtop* and *5-Passenger Coupe* models; these are identical except for the



A factory mechanic is shown giving a last minute check to a shiny **COMMANDER Hardtop** immediately after it has rolled off the line.



The rear seat armrest of the Hardtop also serves as a catchall. Upholstery is nylon. Just off line, floor mat is not installed.



The **CHAMPION** instrument panel differs from that of the **COMMANDER**. Switches above the unhooded instruments. (Studebaker)

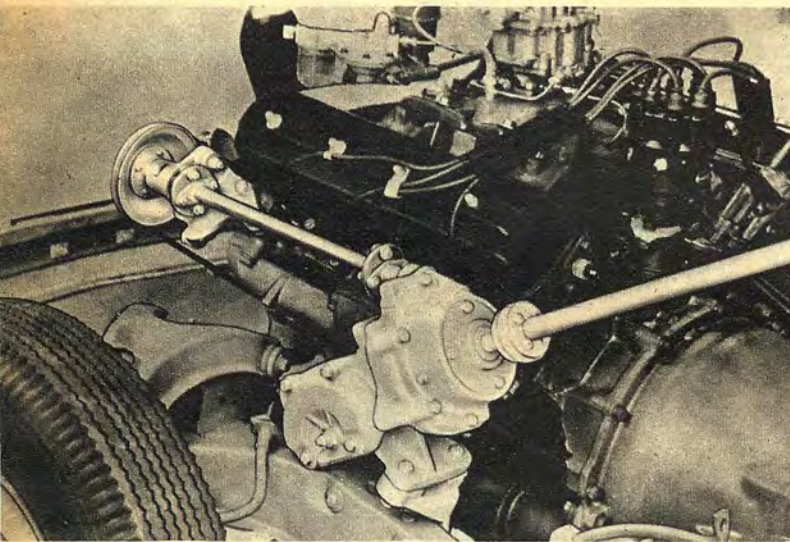
The cowed instruments and front interior of a test **LANDCRUISER**.

ROAD TESTING the '53 STUDEBAKER

continued

door posts which exist on the Coupes only. The dome light switch has been moved to the left side and windows operate much smoother with full length guide channels.

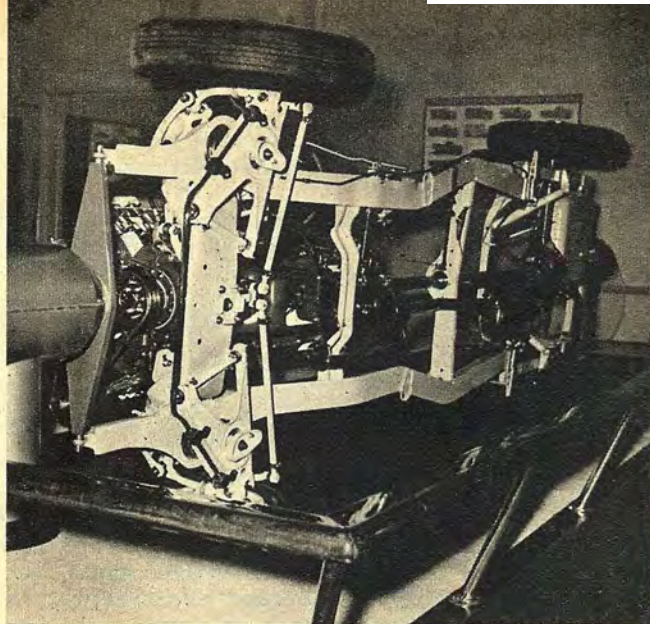
With an overall height of just 56-5/16 inches, a wheelbase of 120-1/2 inches, these two jobs will probably be the sleekest stock cars in the USA this year. That wheelbase, incidentally, is at variance with some previously published reports—but these are the facts. Actually the *Land Cruiser* has the same long wheelbase while the two and four door family sedans in both the *Champion* and *Commander* series measure just 116-1/2 inches from hub to hub. In height, too, the sedans differ, having a greater height of 60-1/2 inches. And, we should add, the hood line on the sedans is higher and the frontal slope back is considerably less—the rear luggage compartment of the sedans is higher with the spare tire mounted vertically while the rear deck of the Hardtop and Coupe is so sleekly low that the spare lies flat.



Studebaker *mechanical power steering*, first in the industry, as it is installed. Power is delivered by means of the belt-driven shaft which runs alongside of the engine. (Studebaker Corporation Photo)

The only means of divining the external differences between the *Commander* and the 6-cylinder *Champion* is to look closely for the small figure 8 which graces the nose and sides of the former. Mechanically, this year's "Studys" remain the same as last with little alteration under the hood. The air cleaner is now the *dry* type with a replaceable cartridge, and of course the completely new mechanical power steering occupies a 6 by 6 inch space as our illustration indicates. Utilizing belt and shaft delivered power from the engine, the power unit features revolutionary multiple disc clutch assemblies, one for right turns and one for left turns; these rotate in opposite directions and are assisted by a train of small gears.

In the interest of space requirements we'll just report that we tried the power steering on a specially modified '52 *Commander* and found it to be most satisfactory and all that it's cracked up to be, though neither my wife nor I can understand why the additional 22 pounds weight, expense, and maintenance are warranted for two reasons: first, the standard center point steering is extremely light, even for a woman, and secondly (Continued on page 58)



This exhibition chassis view shows the front suspension to advantage as well as the frame, propeller shaft, etc. Note that the propeller shaft cannot drop in the event of a universal joint failure.



This is the original hand built **COMMANDER** Hardtop tested by the writer at the Studebaker factory proving grounds late in January. Rainy weather is responsible for the appearance of the car. At upper right in photo is the entrance to the rough road runs and hilly area.



Two **CHAMPION** sedans, immediately after rolling off the assembly line, parked in staging yard. Article covers only **COMMANDERS**.

Road Testing the '53 Studebaker

Continued from page 10

when the *feel* of the road is lessened by the power steering, a lot of the fun and possibly a safety factor has been taken away from driving. Of course that's only our opinion, but we personally prefer a high ratio worm gear system without boost—it takes all types to make the world.

Right here is a good place to mention that the models we checked (the *sporty* Coupe and the Land Cruiser) turn in a 40 foot, 6 inch circle, while the *non-sporty* 116½-inch WB. sedans turn around in 39 feet!

Before departing from Studebaker, the writer had a short session with a representative of the Engineering Department. I asked *why*, if an approach to a sports car was the motive behind the remarkable new design, was it deemed advisable to go to the very non-sports wheelbase of 120½ inches. The answer, briefly, was that to *achieve a low silhouette and retain the rear seat* necessitated this dimension, otherwise "the rear seat passengers would be too far to the rear." In other words, according to Engineering, the back seat would have been nearly over the rear axle had the wheelbase been retained at the standard Commander's 116½ inches, to say nothing of being reduced to the point where the car could turn on a more equal footing with some of the imported larger sports cars that are causing considerable worry among American manufacturers. Frankly, this reasoning sounds strange in view of the forward-of-the-rear-axle back seat of the Commander, but that's what he said.

But, back to the proving grounds which we so inconsiderately left in the third paragraph. We were assured that the speedometer was accurate—"It has to be calibrated, you know, for our own engineering test problems." Now the writer has stated his own individual beef that the sporty Hardtops and Coupes are too long in the wheelbase department. That's the only big criticism

I have. The Commander is truly an excellent performer and I'll take an oath to that statement. Here briefly is what we learned, so hold on to your hats while we go for several spins around the track and up over the hill through a course that makes a corkscrew seem straight.

FAMILIARIZATION was scarcely necessary since the column shift and the overdrive was conventionally operated. Acceleration was quite fast, so after a few laps we stopped, got out the note book, and got ready for some speed. Four runs from dead stop to 60 mph gave these times: 14.0; 13.6; 13.8; and 13.6 seconds. Reynolds told us later that the engineering test drivers had gotten better times, down to 13.0 seconds, but when the track was completely dry. The day we drove, there were a few damp spots on the track, so we were just slightly inhibited when it came to giving it everything the car had. I'm confident that on dry pavement, this new Studebaker Coupe will do an honest zero to 60 mph in 13 seconds easily.

As a matter of fact the substitution of the 7.5 to 1.0 high compression heads should make this little stock car somewhat of a bomb. According to instruments, this job we were driving has developed 190 pounds torque at 2,000 rpm with the 7.0 to 1.0 heads. There's plenty of seat action available: we were cruising nicely at 60 mph as we came out of a curve; we punched the throttle and our stop watch simultaneously and in 11.8 seconds we were hitting 80 mph by the use of the kickdown from overdrive to high gear.

Deciding to see what the feel of the car would be while accelerating rapidly on a curve, we eased into the next curve at 50 mph in overdrive. Though hitting the throttle hard, we felt very little sway, no rear end slide, and kept right on around the curve and reached 80 mph in 16.6 seconds. Then, letting up

for overdrive to take over, we gradually accelerated through the next curve and hit the straightaway at 85. The car felt good all through the curve—no bad tendencies, nor was there any difficulty holding to the appointed center of the track without drifting. We had the throttle on the floorboard now, so by the time we were half way down the track straightaway the speedometer was indicating 98 mph. We rode into the next curve at 90 and were amazed to find the road clinging ability of this job had not been exaggerated by Ed Reynolds. With the center of gravity only 22 inches above the ground, this little baby sticks like a postage stamp. On a long straight shoot there is every reason to expect the new sporty jobs to top 100 mph with ease.

Next we tried gear speeds with equally pleasing results. *First* is good for a shade over 36 mph, *second* for a good 61, *third* (which is regular high gear) for 86-87. Later I asked Bob Walton, the public relations director, whether Studebaker had any competition in mind. The answer was an emphatic "NO" but it would indeed be interesting to see this fine handling five-passenger Coupe in next year's Monte Carlo Rally or some similar event.

On the rough, specially built section of the proving grounds there are sharp corners, flat stretches with diagonal waves three to five inches deep, and grades of various degrees. Starting up a 10 percent grade in 3rd gear at 10 mph, we accelerated and reached 20 mph in a split fraction over 10 seconds. Sharp corners that would cause a great deal of side sway to many cars phased the "Study" very little; the rear wheels with their nearly flat elliptical leaf springs held firm on fast corners and the full width anti-sway bar in front made steering simple. The shocks are Monroes and are a bit on the stiff side.

THE steering wheel is fitted at a steeper angle than in the sedan and Land Cruiser models; visibility is excellent due to the extremely low hood line and the low rear deck will aid in parking. The ride, while somewhat stiffer than in the average passenger car, is to our way of thinking, at least, a great improvement over the slushy feel when cornering many cars. The steering wheel, which I'd like to see changed to a Blummell adjustable, turns only 2½ turns lock-to-lock. We liked this feature very much indeed.

Equipment and instrumentation is adequate; we'd add only one item, a tachometer. The availability of a rear window defroster is indicative of the planning that this outstanding independent manufacturer is giving its new models. The rear view mirror is now wider and it's located at the top of the windshield. The Coupe features either a nylon upholstered interior or an optional plastic leatherette at no extra cost.

We didn't drive a new model fitted with Studebaker's automatic transmission (discussed elsewhere in this issue) but we did drive the new Land Cruiser. One of the company's test drivers came in off a test run, unloaded 600 pounds



of weight, and my wife and I and our two children climbed in. This Land Cruiser, about 4½ inches higher but with the same wheelbase, had 10,506 miles racked up. We found this family sedan to be extremely comfortable, light on the wheel (without power steering), capable of zero to 60 mph in 14.6 seconds consistently, and able to corner very nearly as well as the Coupe. About 300 pounds heavier, it still had sufficiently good scat to climb a 10 percent grade at 10 mph in third without lugging and to accelerate to 20 mph on this grade in 11.4 seconds.

As a sidelight on the Studebaker's new ride, which is a bit stiffer, we should mention that our seven-year-old daughter curled up on the rear seat and slept through the rough road tests. No, we didn't do the rough stuff at extreme speeds, but we did stick to the rough course's 40 mph speed limit on the straight stretches and we took the curves, sharp ones too, at 30, the posted speed.

The long sweep of the rear fenders,

the glare reducing visored effected on the headlight rims, and the lower, wider look created by designer Raymond Loewy is indicative of the new kind of thinking being forced upon this country's auto manufacturers. As we go to press there are as yet none of these newer new look jobs roaming the streets, but it's safe to say that the buying public will be as interested as were we when we spent that very pleasant day on the proving ground at South Bend. I'd say this is an especially good bet since a factory announcement says that prices have been reduced a bit on new models.


"What about the announced convertible?" you say. Well, the way we got it at South Bend is that there *isn't* going to be any soft top, at least not for some time. It could be that Studebaker has heard that the Jaguar "Fixed Head Coupe" is now all the rage having surpassed the popularity of the XK Roadster. But I can say that Studebaker has a sleeve full of new ideas and that South Bend is going to be tough competition

with their radical new design. I just wish the wheel base was 5 or 6 inches less—then who knows—the Hardtops and Coupes may yet show up at a few rallies. In fact we'll be surprised if they don't, for sports car fans will almost definitely like it, and that's all it takes.

PRINCIPAL SPECIFICATIONS '53 STUDEBAKER COMMANDER HARDTOP and COUPE

Note: Specs different for the regular 2- and 4-door sedans are detailed in the accompanying article.

ENGINE: 8-cylinder V-type with overhead valves; full length water jackets; 5 main bearings; bore 3¾ and stroke 3¼ inches; displacement 232.6 cu. in.; horsepower 120 at 4,000 rpm; torque 190 at 2,000 rpm; compression ratio 7.0 to 1.0 standard with 7.5 to 1.0 heads optional; pressure oil system, 6 quarts capacity with floating intake.

DIMENSIONS: Wheelbase (Hardtop, 5-pass. Coupe, and Landcruiser) 120½ in.; Sedans 116½; Front Tread 65½ and Rear Tread 55½. 

How to Drive in the Mountains

Continued from page 29

scenic highways leading to the tops of two 14,000-foot-plus pinnacles—Mount Evans and Pike's Peak. Some parts of these drives can scare the enthusiasm clean out of tourists who aren't prepared for the experience, but the view is well worth the effort of making the trips. Also, of 29 commonly used Colorado mountain passes, only seven are less than 10,000 feet above sea level. Similar terrain exists throughout the twelve Western States.

Yet, accidents on these roads are rare, and most of these routes are traveled the year-round by both experienced and inexperienced mountain drivers.

If you're the worrying kind, however, here are a few reassuring facts about mountain motoring:

Smooth, well-engineered highways, adequately marked, lead deep into almost every Western American wilderness.

You have plenty of horsepower under the hood that helps to level off what used to be some pretty sizeable climbs.

Mountain driving can be as easy as any other kind of driving, and just as safe, if you take a few simple precautions and follow some common sense rules.

If you have any qualms, try checking yourself out on the following ten commandments of summer mountain driving:

1. Inspect your car. Be sure it is in good shape. Have the motor tuned, brakes adjusted (and relined if the lining is thin), wheels aligned, the cooling system checked—don't overlook the thermostat.

While it's smart to have your car in tip-top condition before starting any prolonged trip, it's especially important for mountain driving because of the unusual demands that may be placed on your vehicle.

2. Learn to observe and depend on signs. If one says "Curve, slow, 45," you can be sure there's a curve ahead. But for goodness sake, don't brake down to a crawl and cause a pileup behind you.

The men who posted the road knew what they were doing when they put up a sign saying you could get around the curve safely at 45 m.p.h. If you can't see what's on the other side of a blind curve, don't let that worry you too much, either. Proceed cautiously—the road isn't going to drop off into a canyon. That leads to the next commandment:

3. Stay on the right half of the roadway and *keep within your lane*. A lane-straddler is a potential murderer. The danger of falling off a cliff is considerably more remote than the possibility of smacking head-on into another car when you encroach across the center line.

4. Go easy on the brakes. On a long, steep downgrade, give your brakes a break by letting compression slow you down. Drop into second or low gear and descend with the car under control. If your car is overdrive equipped, take it out of o/d. It's foolhardy to depend on brakes alone. Brakes which have been "ridden" over a distance generate a tremendous amount of heat that can cause them to fail or "fade." Then where would you be? Let compression do the work.

5. On a long, steep climb, don't let your motor labor. It's easier on your car, and the people behind you, if you shift into a lower gear instead of struggling along in high. You'll get there faster, too. A laboring motor ages rapidly and is more likely to overheat. Remember, people quit bragging about "making the hill in high" about the time the Model "T" went out.

6. Keep your motor cool. If your

gauge indicates that the car is running hot, pull off the road for a short breathing spell, but keep the motor idling so the water will continue to circulate. Lift the hood so air can get around freely, and let the motor cool down. If there's a wind, it helps to face the car into it. Refill the radiator at the first opportunity, with motor running.

REMEMBER that altitude lowers the boiling point of water. At sea level water boils at 212 degrees Fahrenheit; at 10,000 feet the boiling point is only 194 degrees—so before venturing into Western mountains, have the correct thermostat installed.

If the car persists in overheating, even though the motor is perfectly tuned, one of several things may be wrong. You may be driving with a high-temperature winter thermostat. The fan belt may be excessively loose. Radiator hose may be worn out and passage of water restricted. The entire cooling system may need cleaning. If your car is more than three years old, a reverse flush radiator cleaning and new hose are worthwhile investments before tackling the mountains.

7. Learn to recognize and watch for vapor lock. This ailment isn't exclusive to high altitudes, but it does occur sometimes in the mountains.

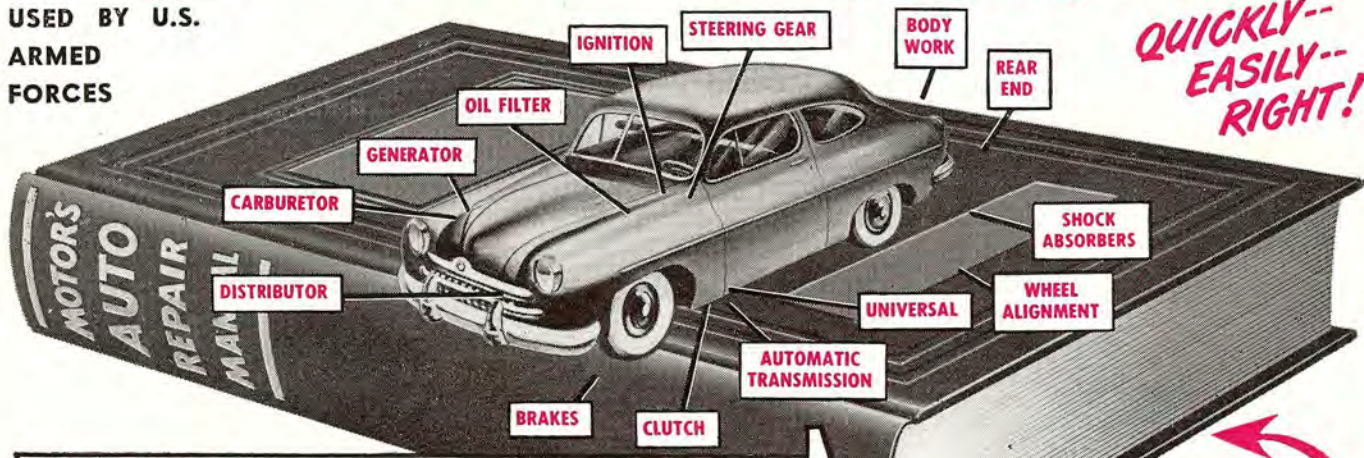
Vapor lock is the name for what happens when the car acts as if it's out of gas even though there is plenty in the tank. An air bubble forms in the gas line. Usually it cures itself when the motor cools. A good idea is to open the hood and toddle off and enjoy the scenery a while. But you can speed up the cure by placing a cool damp cloth over the fuel pump for a few minutes. Don't get excited and choke the motor when it stalls from vapor lock in hot weather. That just makes it harder to start again.

8. *Stop* to enjoy the scenery—don't rubberneck while driving. It's amazing how the curves (and oncoming cars) pop out of nowhere while you're admir-

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