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MONTHLY

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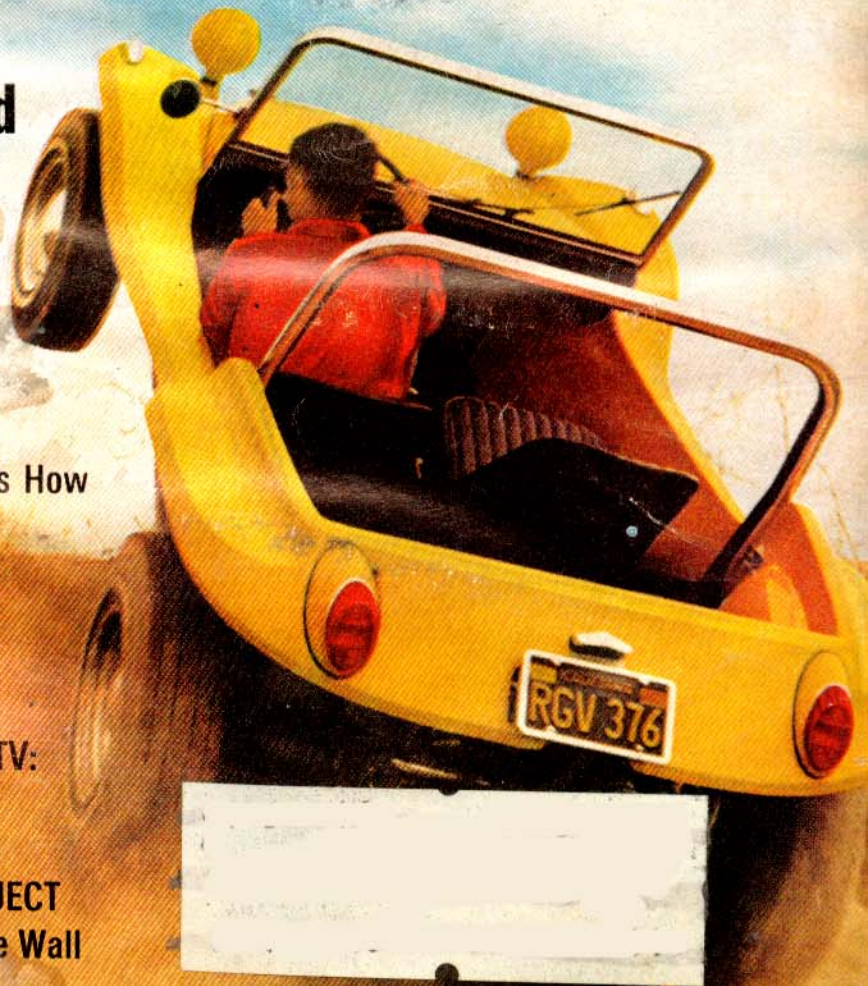
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Gus Gets Off on the Wrong Foot

If that fool kid learned to drive properly, Mr. Attinger insisted, the brakes wouldn't grab—and would Gus please tell him so? No, Gus wouldn't

By MARTIN BUNN

ILLUSTRATION BY FAY QUIGLEY

"There's oil all over the engine," whined the voice on the Model Garage phone. "Come over and tow it in."

"Be there in 15 minutes," said Gus Wilson.

"Look for the Chevelle in the parking lot. I'll see you there," said the voice.

As Gus hung up, Stan, his assistant, burst into the office.

"I thought Mrs. Allen was our kookiest customer, Boss. But the one I just had beats her. She wanted me to loosen the parking brake so it wouldn't smell if she forgot to take it off. Only a dame could get a wacky notion like that."

"Don't bet on it. I've heard some wilder ideas about cars than that."

"Huh! Show me a man with one to match this, and I'll buy you a lunch."

As Gus turned into the parking lot of a small, modern plant, he recognized a 1965 Super Sport Chevelle. Its owner, Peter Attinger, had been in for a tune-up recently. Gus maneuvered the truck behind the car.

"Come look at this," said Attinger in a high, unpleasant voice.

Gus followed him. The car hood was up. Its 327-cubic-inch V-8 looked as if somebody had emptied a bucket of oil on it. The block, firewall, and hood underside were coated. A puddle had dripped onto the paving, and

Gus smelled the rank odor of burned oil.

"It was so hard to start this morning I had to send for a booster battery," said Attinger, a paunchy man with big jowls. "It finally ran, but the engine had no power and stalled at every light. Finally I got on the turnpike and booted it to 65. After a couple of miles there was this smell of burning oil.

"I had to get here for a conference, and my gauges showed temperature and oil pressure okay, so I kept going. When I got here, there was smoke coming from under the hood, and after I saw this mess I thought I better not drive it. So I called you."

Gus pulled out the dipstick. It showed fluid well above the full mark. His nose told him it wasn't all oil.

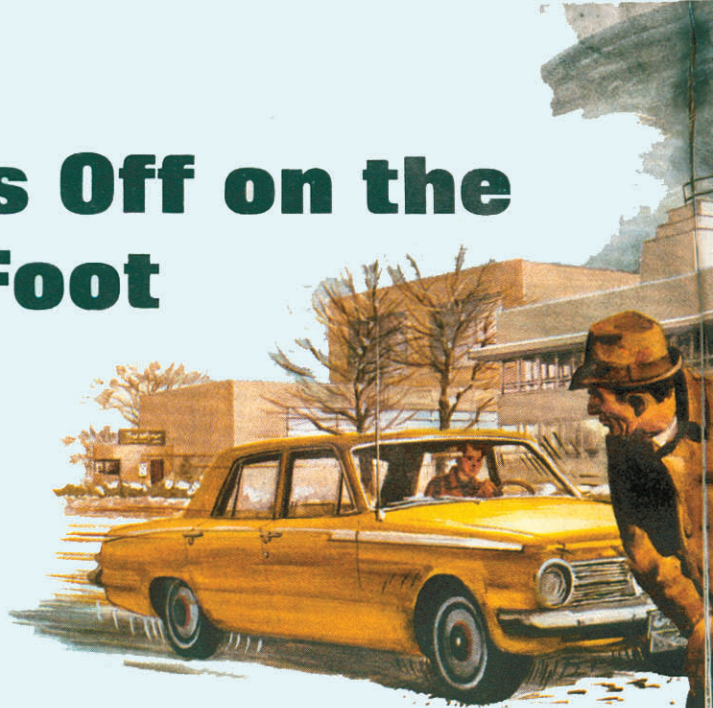
"There's gas in the crankcase," he said. "You'd have burned a bearing if you had driven much farther."

"Well, haul it off and fix it," said Attinger. "My boy's coming to take me home in my wife's car. Here he is now."

A Valiant sedan had rolled into the lot. Its young driver headed for the Chevelle at a modest speed. But as he approached, his front wheels suddenly locked, bringing the car to an abrupt, skidding halt.

"That fool kid! I've told him to use his right foot," shrieked Attinger.

A teen-ager got out of the car. Slender,





As the young driver approached, his front wheels suddenly locked, bringing the car to an abrupt halt.

with high cheekbones, he didn't look much like his father.

"There's something wrong with the brakes, Dad. Mother noticed it, too, before that ankle laid her up. Just touch 'em, and they toss you into the windshield."

"Anything wrong with those brakes is your fault!" cried Attinger furiously. "I warned you not to use your left foot."

"I know, Dad. I have been using my right foot. But the brakes still grab."

"Because you ruined 'em." Attinger turned to Gus. "That car only has 6,000 miles on it. Brake lining doesn't wear out in 6,000 miles, does it?"

"No," said Gus cautiously. "But brakes can grab because of grease or brake fluid on otherwise good linings."

"Well, they don't grab when I drive!"

shrilled Attinger. "Never mind. I'll come for my car this time tomorrow. Okay?"

It was too late to work on the Chevelle that day. Next morning, Gus inspected the breather cap. It didn't look as if the oil had foamed out there. The Powerglide transmission was full; so was the power-steering system. That left little doubt that the splashed oil had come out of the crankcase. But, Gus wondered, how?

Going by, Stan whistled at sight of the oil-soaked engine.

"I've finished that tune-up, Boss. I don't need to ask what to do next."

"Nope. But while you're cleaning it up, try figuring how gas got into the crankcase while engine oil went out."

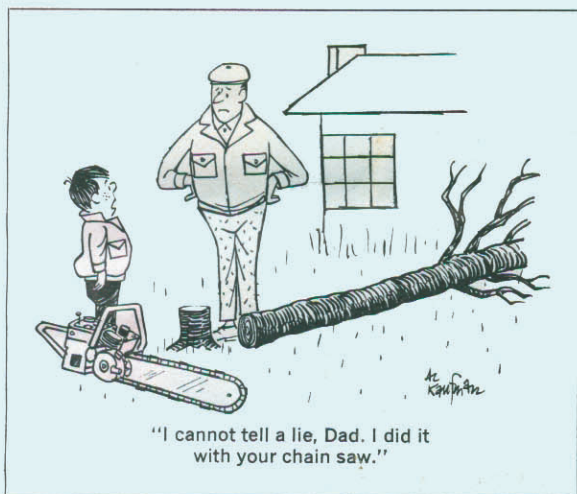
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Stan set to work. When Gus next saw the engine, it shone. But Stan was puzzled.

"The gas part's easy: a ruptured fuel-pump diaphragm. If enough gas gets into the crankcase to raise the level up to the pump, it might even shoot oil to the carb. But why all over the engine?"

"Let's yank the fuel pump," said Gus.

While Stan disconnected the fuel lines, Gus unscrewed a bolt to the right of the timing-chain cover. In its place he tightened a longer bolt to hold in the vertical push rod that worked the fuel pump. Gus removed the pump and took it to a bench.



After wiping off the last vestige of oil, Gus filed alignment marks on both diaphragm flanges and loosened the screws. Noticing a thread of oil on the casting, he wiped it away. It reappeared. Gus studied the jagged line of oil under a light.

"Find something, Boss?" asked Stan.

"A crack in the casting," Gus handed Stan the pump. "Probably it ruptured the diaphragm alongside it. That pumped gas into the crankcase, raising the oil level. It got so high the pump fed oil and gas to the carburetor, making the car hard to start. By yesterday morning the crack had opened enough, from heating and cooling a few times, to spray the stuff out. The gas evaporated, but the oil stayed."

Finding a replacement in stock, Gus installed a new pump, replaced the original bolt to plug the push-rod bore, and flushed out the carburetor. Stan drained the contaminated oil and refilled the crankcase.

The engine started as soon as fresh gas reached the carburetor.

About four that afternoon, above the usual hum of traffic outside, there came a sudden squeal of brakes and the thud of bumpers. Gus wasn't surprised to see that Attinger's Valiant was the car in front.

The driver of the other car inspected both, shouted something conciliatory, and drove off. Attinger drove into the shop.

"The brakes are terrible!" he whined as he got out. "I tried to slow down for turning. They almost banged me into the windshield, and that tailgater hit me. I want them looked after right away. How about my other car?"

Gus showed him the cracked fuel pump.

"That's the factory's fault, I guess," muttered Attinger. "But these brakes are something else again. My boy's taking a bus here to drive one car home. When he comes, you tell him how he ruined the brakes."

"I'd have to be sure he did, first."

"He's been braking with his left foot. I'm no mechanic, but I know that's wrong."

"Where did you learn that?" asked Gus.

"In a taxi. It had automatic drive, and a sign on the sun visor:

'DON'T USE LEFT FOOT ON BRAKE. IT CAUSES GRABBING.' The driver told me they're supposed to brake with the right foot."

"That sign was a lie," said Gus flatly. "The left foot can't cause grabbing any more than the right. But a sloppy driver using his left foot may keep feeding gas with his right as he brakes. Chances are, that's why the sign in that taxi. With all kinds of drivers in the fleet, they want to avoid needless extra brake wear."

"Humph! I always use my right foot."

"Some of us do," said Gus, "because we started driving manual-shift cars. But car makers widened the brake pedal on automatics to let the driver use the left foot. Some experts use it only for backing—it gives hairline control. Others, including some taxi drivers, use the left foot all the time. In all-day traffic driving, they feel, it's less tiring than lifting the right foot off the gas every time. Also, in icy or slushy

weather, there's no risk of slipping off the brake onto the gas, as there can be with the right foot.

"But you have to watch that one, to keep off the gas when braking. If you're driving both manual and automatic shifts, it's probably smart to stick to right-foot braking with both. But mechanically it makes no difference. If your son uses his left foot, I can't tell him it does."

Attinger reddened. Gus drove the Valiant up a service ramp, jacked up the front, and took off the left front wheel.

"No grease on that lining!" Attinger burst out triumphantly.

The lining was indeed almost new. Gus found the brake-cylinder boots innocent of leakage, the backing plate tight, shoes correctly positioned. He pulled the right wheel and found the same true there.

"So it *must* be using the left foot," cried Attinger. "Maybe now you'll tell my son."

Beyond Attinger, Gus saw the boy, who had come in unheard. His face was white.

"Your son just came in," said Gus.

Attinger acknowledged the boy with a grunt. Gus turned one of the wheels into the light to inspect the drum. It was dry, clean, and unscored. Inside lay a little heap of loose dust that fell to the bottom constantly as he turned the wheel. The other drum had an equal amount of dust in it. Gus flipped both wheels over, dumping the dust, then wiped the insides of the drums.

Covering the wheel spindles with a rag, he brushed all dust off the shoes, springs, and backing plates, lightly sanded the linings, and dusted them off. With calipers he gauged the inner drum diameter and adjusted the shoes of each wheel to it.

"Is that all you're going to do?" demanded Attinger as Gus lifted a wheel on.

Gus nodded, replaced the outer bearing, washer, and nut, carefully adjusted the latter, and installed a new cotter pin. After replacing the other wheel, he let the car down and asked Attinger to come along.

A first gentle application of brakes slowed the car smoothly. Gus then tried them at various speeds and pedal pressures. At no time did the brakes grab or pull.

"What was the trouble?" asked Attinger.

"That dust in the drums—some worn off the lining, some plain road dirt. As the wheels turned, it was distributed over the linings. When you braked, there were pinches of dust between drum and lining.

"Under those conditions, brakes don't hold well at first, so the driver puts on more pressure. As the dust is squeezed thin, more lining suddenly comes into contact—and grabs. Often the trouble starts in damp weather; the dust seems to absorb moisture and act like grease. Once there's enough dust, it acts the same on dry days. Your son had nothing to do with it."

Both men were silent all the way back.

After paying his bill, Attinger started to get into his car. He turned toward Gus.

"Thank you for the repair and the good advice." He swung toward the boy. "I was plumb wrong about the brakes, Eddie. Take the car home—and use whatever foot you think works best for you."

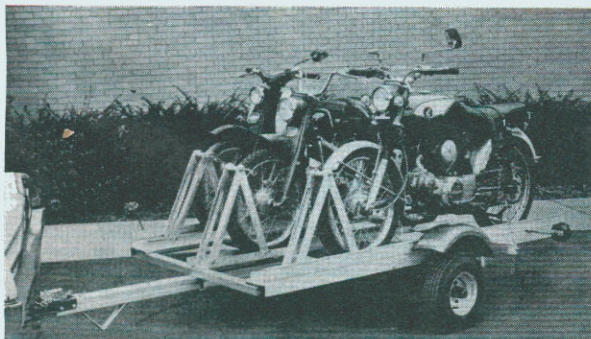
"Okay, Dad." The boy's face came alive. He looked at Gus with wordless gratitude.

"I sure owe you tomorrow's lunch, Boss," said Stan. That left-foot gag was as wacky as anything I ever heard."

"I'll settle for hamburger and coffee, if you'll lift *your* left foot," said Gus.

"Huh?"

"You happen to be standing on mine." **PS**



Lightweight motorbike trailer

This light aluminum trailer can carry a hefty 1,000 pounds—enough to haul three motorbikes with you for races or family vacation fun. Made by Trailex, Canfield, Ohio, the rig is almost maintenance-free and has no welded joints that can part from fatigue. The trailer is eight feet long and 43 inches wide. It has high-speed demountable wheels and tires, safety chain, adjustable front anchor stand, and turn and stop lights. Price: \$195.