

JULY 1967

35 CENTS

Popular Science

MONTHLY

'68 CARS

Secret Color Photos
and Latest News

How to Time Your
Car Engine

Machines That Make
Money for You

**New Deep-
Diving Sub:
OUR FIRST
FERRY
TO THE
BOTTOM
OF THE
SEA**

19 Smart Tricks
with a Router

Breakthrough! New
Foolproof Water Paints
You Can Use Anywhere

Surprising New Facts
About Your Muscles





Gus beckoned Eldon under the car and pointed to the split line. Fluid beading the crack dripped to the floor.

Gus and the Case of the Now-and-Then Brakes

The Akins kid had just got his license back after a reckless-driving charge. Now had he run into his accuser's car on purpose?

By MARTIN BUNN ILLUSTRATION BY RAY QUIGLEY

"**H**ide the chips, Boss. It's a raid!" sang out Stan Hicks, looking through the open door of the Model Garage.

Gus Wilson rolled out from under a car. "It's only Chief Eldon," he said. "Probably come for a cup of my good coffee."

"In *two* cars?" asked Stan.

Scrambling up, Gus saw that behind the chief's car stood a second squad car.

Sam Eldon unfolded his lanky body from behind the wheel. His movements were slow but precise; and behind the creased eyes—which, with his sagging jowls, always made Gus think of a dolorous bloodhound—was a wide-awake alertness.

"On your toes, Gus," snapped the chief. "This is official business."

"The kind I put in a bill for, and wait a month for the village to pay?"

"Sorry about that, Gus. See what you can do about this car they bought me last summer. Come December it was saying 'Who, me?' when I tried to boot it up fast, and dying any time I started up from a stop with a hot engine."

"Must be a *plainclothes* police car," cracked Stan.

"Our mechanic," Eldon went on, "reset the timing and the point dwell, and checked the automatic choke setting. At first that seemed to cure it. Two weeks later it wouldn't even start. We made the dealer tow it to his shop, where they put in new plugs, points, condenser, rotor, and finally a new fuel pump. But it wouldn't hold a steady 70 when I tried it. It accelerated, then slowed, then tried again.

Surging, is what you'd call it, I guess."

"Sounds like fuel trouble," said Gus cautiously. "Was anything else done?"

"Sure. The dealer put on a new carburetor. Now I carry this"—Eldon brought a small hammer from under the seat—"to help start it by smacking the carburetor."

"Very scientific," said Gus drily. "I'll see about it. Want some coffee?"

"No, thanks," replied Eldon. "I've got to see about that Ron Akins kid; got his license back this week, and already he's in trouble over another accident."

Gus shook his head. "Too bad. Ron was too wild last year, when he lost out on that reckless-driving charge. But I thought that license suspension straightened him out."

"Seems it didn't," snapped Eldon. "I'll see you about my car this noon."

The engine of the chief's 1966 Ford was still warm when Gus got in to move it out of the way. The starter cranked briskly, but the engine failed to fire.

From what Eldon had said, Gus's first guess was that the trouble might be percolating fuel. He held the throttle wide open while cranking to empty the intake manifold. The engine still didn't start.

Gus got out and checked the carburetor vent rod, which should have bled off pressure, preventing percolation. The rod setting was to specs, the automatic choke open, its overtravel correct. In fact, the engine showed signs of competent care on the part of Ed Foyle, the police me-

Continued

chanic. It was clean; the spark-plug porcelain glistened; the power-steering hose and neoprene fuel line were neatly strapped together.

A hot spark jumped eagerly when Gus held a spark-plug-cable end near the block and had Stan crank over the engine. Gus replaced the cable. Then, grinning wryly, he tapped the carburetor bowl as Stan again turned the engine over.

With a sputter and a roar, it caught.

"Like you said, Boss," remarked Stan as he got out. "That was real scientific."

Gus had just decided to blow out the fuel line when Eldon strode in whistling.

was stopped at the station light. Jamison's car came up behind and never stopped. It hit Carter's hard enough to dent his bumper, and jolted Carter enough to knock his hat off. When he saw who was driving, he yelled murder. Now he's claiming that Ron hit him deliberately to get even. He wants to charge vehicular assault."

"What evidence has he got?"

"The best," said Eldon. "It looks as if young Akins recognized Carter's car and rammed him deliberately. The man on traffic duty checked, and there wasn't a trace of skid marks to show Akins even touched the brake."

"What does Ron say about it?"

"That he had the pedal to the floor, but the brakes didn't hold. He says Jamison had warned him they were acting up, but the druggist denies it. Jamison is pretty huffy because we impounded the car. I have to hold Akins, too, but haven't booked him yet.

"After we'd had the car towed to the station," Eldon went on, "I tried the brakes myself. They held enough to lock the wheels. Either Akins is lying, or those brakes hold some times and not others. Could

the brakes really work like that?"

"Let's go find out," said Gus.

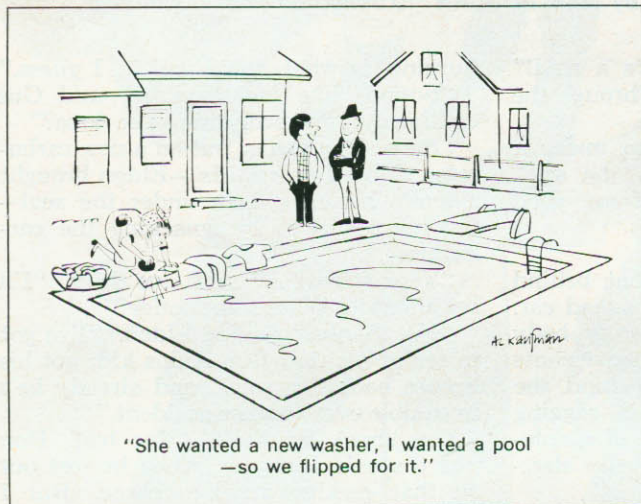
The police garage was dim and quiet. Eldon went into the station house. By the time Gus had driven Jamison's old car in from the yard and onto a lift, Eldon was back with Ron Akins.

"Okay, tell it to Gus Wilson," growled Eldon, "and see if he swallows it."

"It's true, Mr. Wilson," said the boy. "Old Jamison did tell me the brakes were tricky. I wasn't doing more than 25 when I saw Mr. Carter's car stopped half a block away. I stepped on the brakes. When they didn't hold, I yanked up the emergency. But I knew it was no good. I had the pedal right down, but nothing happened, except we hit."

Gus nodded and walked under the car. One rear wheel showed traces of brake-

Continued



"She wanted a new washer, I wanted a pool
—so we flipped for it."

"Not noon yet, Sam," Gus pointed out.

The chief waved a hand. "It's not about my car. Is that coffee still hot?"

"Sure. Come along." Gus led the way.

In the office, Eldon, his loose-jointed figure jackknifed into a chair, grasped a hot cup in both hands and stared thoughtfully at the black fluid.

"The car Ron hit six months ago was Russ Carter's. Not much damage, but it was plainly the kid's fault. For sheer vindictiveness, Carter laid a charge of reckless driving and made it stick. Last Monday the boy got his license back and started delivering for Jamison, the druggist. Jamison's a tightwad and doesn't pay much, but it's not every merchant who'd let a young fellow with a suspension record drive for him.

"At eight this morning, Russ Carter

fluid leakage around the drum. Gus ran a trouble light along the brake line.

He stopped where it ran over the rear-axle housing, and rubbed off some of the grime. Where it was clamped, the line had evidently chafed and split. The dark stain of a big leak ran down the housing.

Gus lowered the car.

"Get in, Ron. After the car is up again, hold the pedal down hard."

The young man nodded, got in, and was hoisted aloft. Gus beckoned for Eldon to come under the car, and pointed to the split line. Fluid beaded the crack and dripped to the floor. Grabbing a wheel, Gus tried unsuccessfully to turn it.

"The brakes seem to hold all right."

Taking a feeler gauge from his pocket, Gus unfolded a leaf and thrust it into the crack. Fluid seeped onto his hand. He poked the gauge about, had to dodge the thin, hard stream that squirted out. With one hand he grasped a wheel. It turned.

"Proof enough, Sam?" he asked.

Stepping out from under the lift, Gus waited for Eldon to get clear, then lowered it. The boy got out.

"Okay, it could have been like Akins said. But why?" asked the chief.

"Because of gooeey, gummy crud in the brake system," said Gus. "Jamison came to me once, hunting a bargain in brake fluid. He probably found it somewhere else—he must have been using a lot since that line split open. Under pressure, the split got bigger, while the cheap fluid he was using gradually turned into muck.

"Most of the time, gummy deposits plugged the leak and the brakes held. But when Ron hit them this morning, the goo had moved. Suddenly, no brakes."

Eldon swore softly. "I'd have had to book him if we hadn't found this. It's Jamison who should be in a cell."

Back in the Model Garage, Gus hauled

an air hose to the chief's car and detached the neoprene hose at the intake side of the fuel pump. He looked at it thoughtfully. A minute later the engine roared.

Later that afternoon Chief Eldon came in. "I don't suppose a spade-thumbed mechanic like you has my car fixed yet," he growled.

"Take it away," retorted Gus. "It's keeping me from more important work."

"Akins is free," said Chief Eldon with satisfaction. "Carter's suing Jamison. I leaned on *him* about operating a car he knew to be unsafe. The boy keeps his job, and the car gets a brake overhaul."

"Been pretty busy, for a cop."

"Yeah. I even put a voucher through for your help, such as it was," returned Eldon equably. "How about my Ford?"

"Your boy Ed is too neat. He strapped the flexible fuel line to the power hose."

"Sure. I thought it was fine."

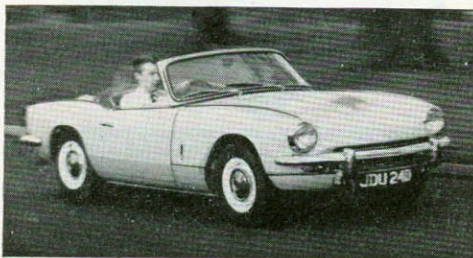
"Right—until underhood heat shrank that plastic strap he used. That strangled the line until the pump had a hard time pulling gas through it, especially when you floorboarded it. When you stopped with the engine hot, some gas boiled away and left a low level in the bowl. With that constricted line, it took a while for cranking to fill the bowl to normal level."

"Why did hammering the carb help?"

"It gained time for pump suction to drag gas in. Maybe sometimes it splashed a little that was left in the bowl into the main jet. Once the engine caught, it worked the pump fast enough to get more fuel."

"Okay, put in your bill."

"No bill this time," Gus said. "All I did was cut the plastic strap. I can afford to do that on the house—for free." ■



Triumph Spitfire gets more power

This Triumph Spitfire Mark III has a bigger engine that zooms it to a top speed of 100 m.p.h. It goes from 0 to 60 m.p.h. in 12.5 seconds. The new model also has a stronger clutch to handle the increased power. Other refinements: smaller, 15-inch adjustable steering wheel, and more powerful brakes with a heftier master cylinder and larger calipers for front disks.