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Gus Challenges an Electronic Marvel

By Martin Bunn

THE middle-aged convertible, top down, rattled into the Model Garage. In the front seat were two young men. In the back was stowed enough fishing gear to equip a rod-and-reel club.

"Drop everything, Gus," said the driver.

"We're going fishing," said his companion.

Gus looked up from a tune-up job into the grinning faces of the Biddle twins, Tim and Tom, one crew-cut, the other shaggy-headed. They had been in Gus Wilson's hair on and off for years since he had fixed their first roller skates.

"Go and get lost," he said. "Just because you two are home from college for Easter vacation doesn't mean that other people don't have work to do."

"You promised to go fishing with us," said Tim.

"Our date was for the opening of the trout season next week," Gus said. "Now I've got a tough engine job to tackle."

"If the truth were known, Gus," said Tim, "I'd bet 10 to one your assistant, Stan Hicks, is the real mechanic here."

"He'd welsh on the bet," Tom put in, getting out of the car. "Remember last year how he wouldn't pay off when we bet we'd catch the limit before he did?"

"Pay off!" said Gus in mock indigna-



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tion. "After I found that you two cheaters had bought half your fish from a 10-year-old boy!"

The twins looked at each other and roared with laughter.

GUS grinned. "Why don't you double-jokers go and bait some fish instead of me."

"Can't," said Tim. "We've got trouble."

"Car trouble," echoed Tom. "If you're a better mechanic than fisherman, Gus, fix it."

"Okay. Anything to get rid of you. Your old tin can did sound a bit rough coming in." He lifted the hood.

"Hold it!" came a peremptory voice. The trio turned and saw a small, rotund, round-faced young man, one arm raised and the other holding a small suitcase. He didn't look much older than the Biddle twins.

"Hold it!" he repeated, coming into the shop, lowering his arm and pointing toward the convertible. "Ignition trouble—I hope?"

"Could be," Gus said, "but . . ."

"Then let me show you the latest in testing equipment," continued the newcomer, setting his grip down. He reached out a pudgy hand that was lost in the garageman's oversize paw. "Gus Wilson, I presume. My name's Anderson—Bill Anderson, V&L Automotive Electronics."

"Yes," Gus said. "I had a letter from your company, but I expected . . ."

"An older salesman?" broke in Anderson. "We're a young firm, Mr. Wilson, in a young business. I'm just out of electronics school, myself." He hoisted his case on the shop bench, opened it, and lifted out a neat metal case with knobs and dials.

"A portable TV," said Tim Biddle.

"Wonderful," put in Tom. "Let's take it fishing with us—when you fix our car, Gus. You come along, too, Mr. Anderson."

"Behave yourselves, boys," Gus admonished. "This isn't a TV set. It's an oscilloscope. An ignition analyzer."

The salesman looked surprised. "Oh, you're familiar with this equipment?"

"A little," Gus said modestly, filling his pipe.

"Ah," said Anderson, going into his spiel. "Then you know that the electronic ignition analyzer is essentially the same

as the oscilloscopes that have been used for years in testing electronic equipment."

He paused, flustered. The Biddle twins were grinning, fascinated by the polka-dot bow tie riding up and down on the little salesman's plump throat as he spoke.

Anderson looked at some cards he had pulled out of his pocket, coughed and continued. "Rapidly changing electrical voltages are converted into a visible 'trace' across this TV-like screen. My scope dramatically portrays the sequence of events in the ignition cycle and reveals at a glance the faults that could otherwise be located only after a time-consuming, step-by-step procedure."

HE UNFOLDED a chart. "This chart pictorially shows what the sweep pattern looks like with various ignition troubles—bad spark plugs, coils, condensers, distributor points, wiring."

"That's very educational, Mr. Anderson," Tim Biddle said as the salesman put down the chart. "But we're on vacation and want to go fishing. How about some action?"

Anderson beamed. "Ah, yes, a demonstration. Now we'll analyze this engine electronically and get you young fellows on your way."

The salesman placed the instrument on a fender and hooked a test lead to a spark-plug wire. He explained how the pulse from the wire triggered a circuit to provide a horizontal sweep across the face of the cathode-ray tube.

"The wire across the distributor breaker points," he went on, "provides a varying voltage to the vertical sweep circuit of the instrument, showing the voltages across the ignition points at any instant. Now, if somebody will start the car . . ."

Tom Biddle obliged. Anderson made some knob adjustments as Gus listened to the roughly idling engine. Then he looked at the scope pattern. There were eight pips on the screen; all appeared to be of the same size and shape.

Anderson frowned. "Hmm. I expected to find one or more of the pips sloughed off, indicating bad plugs. Let's stretch out the presentation and examine each pulse more closely." He checked off: "Point spring tension regular, no condenser trouble, no excessive distributor-shaft wobble, wiring okay." He looked up. "Mr.

Wilson, the trouble with this car is not electrical."

"I'm no electronic marvel like this gadget of yours," Gus said, "but let me try something." He turned off the ignition, scanned the spark-plug wiring, and huddled over the distributor.

"There," he said, "Unless I miss my guess, the trouble was electrical." He hit the starter. The engine caught, ran roughly for a moment, then settled down to a smooth idle.

"April Fool, Gus!" Tim shouted glee-

home," Tom Biddle said. He took a playful punch at his twin. "You old cheat. No wonder you bet me that Gus would spot the trouble in less than 10 minutes."

ANDERSON slammed down the lid of his suitcase. "Screwballs," he muttered. "Why didn't you give me a hint, Mr. Wilson, before I made a fool of myself?"

"You hardly gave me a chance, Mr. Anderson. I've had an oscilloscope for quite a while. Had one of the first to

come out. But like any tool, it's not a cure-all."

"I realize that, Mr. Wilson," admitted the salesman. "But about this trouble?"

"Why, you just backed right into about the only ignition trouble I've found that most oscilloscopes won't detect. Some of the more expensive ones will, but not yours or mine."

"If these characters had driven around the block a few times and fouled the plugs, your scope

would have picked it up immediately. In this case, it told only that the plugs were firing, not *where*."

"Thanks for the lesson, Mr. Wilson. Maybe I am kind of green."

Gus grinned at the salesman. "Are you a fisherman?"

"Yes. But why?"

"Because I'm charging these pixies eight dollars. That'll more than pay for our fishing licenses."

"We'll pay you in fish," Tim Biddle shouted over the roar of the motor as he backed the car out of the shop.

"It'll go on their bill," Gus said grinning, "just to teach them a lesson." He shook the salesman's hand. "I'm sorry for the hazing you took, Mr. Anderson. Stop by again. My scope won't last forever. And bring your fishing gear along."

"I'll have it, Mr. Wilson—and maybe a better sales line to tackle you with." END

Next Month: Gus cracks a tough nut.



"... or you can unhook it and use it as a handy portable radio."

fully. "See, Tom, I said Gus could do it."

Gus groaned. "Oh, no! I should have guessed."

"Huh?" gulped a bewildered salesman.

"Son," Gus said, "you and I have been the victim of a practical joke. This is April first, and we've been April-fooled—but good."

The Biddle twins guffawed. Gus relit his pipe. Anderson replaced his instrument. "I know when I'm licked," he said.

"This has nothing to do with you," Gus said. "These two jokers have pulled the oldest automotive practical joke in the book. They switched two spark-plug wires. For years I've 'fixed' cars with that trouble the morning after Halloween."

"But how did you locate the trouble so fast?" Tom asked.

"Well, Tom, your brother had the car in here two weeks ago for a tune-up. New plugs, condenser, points—the works."

"That was the weekend I didn't get