

SCANDAL IN CAR REPAIRS: Interview with Sen. Philip Hart

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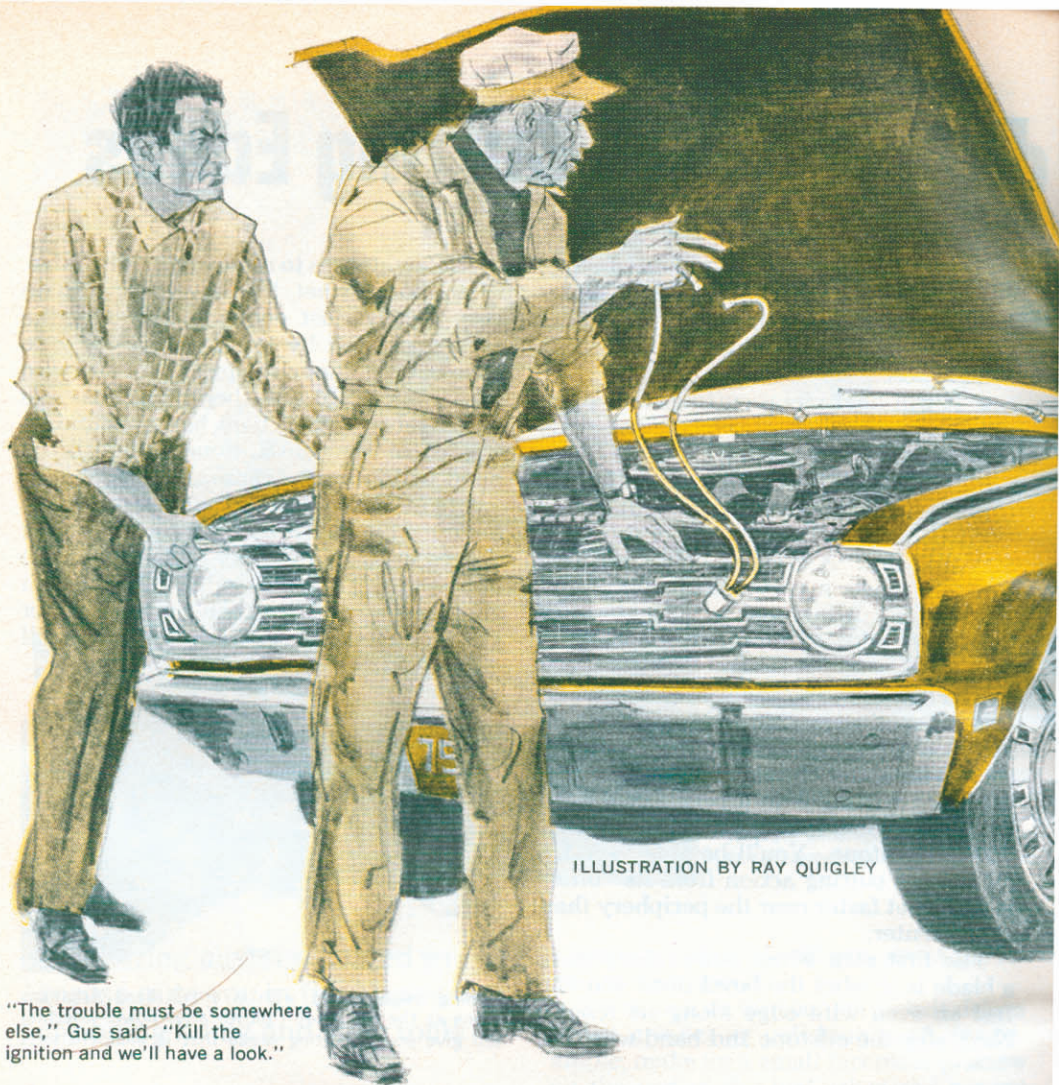


ILLUSTRATION BY RAY QUIGLEY

"The trouble must be somewhere else," Gus said. "Kill the ignition and we'll have a look."

Gus Gets Stan Out of

By MARTIN BUNN

Sorry boss, but your puffing could stir up air currents."

Gus Wilson scowled at Stan Hicks, his assistant, and dropped his favorite pipe into a tool drawer.

"I guess that means me too," said the portly man standing next to Gus. He ground out his cigar in an ashtray.

"Afraid so, Mr. Osborn," nodded Stan. "The service bulletin says that the test should be performed in a draft-free room.

Since it's a new technique, I want to follow directions to the letter."

Gus fought to keep from smiling. "New technique!" he mumbled to himself. "I did the same thing to track down wind whistles years before you were born, Mr. Hicks—without any hocus-pocus. But I agreed—the week is yours."

Stan scampered around the Model Garage closing windows and doors. Then he turned off the three wall fans. "That'll kill any air circulation," he said.

"I'll vouch for that," said Gus. He pulled



Gus had given Stan one week to try the "modern" approach to car repair—but with two days to go, a little trouble arose

a Scrape

a handkerchief from his back pocket and began mopping his forehead.

Stan circled the '67 Buick four-door hardtop, parked in the center of the shop floor, slowly. Then he reached inside and flipped on the car's heater blower. "Now we can begin," he said.

"How is this test going to stop that infernal whistling I hear?" asked Osborn. "I can't see any connection between a closed garage and doing 60 on a highway."

"It will tell me where the leak is," replied Stan. He glanced sideways at Gus

and added: "Accurate diagnosis should always be the first step in solving a service problem."

Osborn nodded, then turned towards Gus just in time to catch a sly wink that Stan couldn't see.

"The car's windows and doors are shut tight," Stan explained, "so the heater blower is forcing air into a closed box—it's acting like a low-pressure air compressor. The only way any air can leak out of the body is to pass through the same openings that let wind leak inside when you drive fast."

Stan took an aerosol spray can from a shelf. "I'll use this stuff to show up the air leaks," he said. "It's spray-on talcum powder."

Working carefully, Stan sprayed a fine cloud of powder around the window seals, forming a thin white layer on the rubber.

"I found the leak," Stan exploded. "It's along the front edge of the right-rear window. Come look."

Gus and Osborn examined the seal and saw that at one point an emerging air leak was rapidly blowing the fine white dust away from the rubber surface.

"The next step is a fast repair job on the seal," Stan said proudly.

"Very well done, young man," said Osborn. "You take care of it while your boss and I have a little chat—in the air-conditioned office."

"I'm with you," said Gus, "soon as I retrieve my pipe."

"Now I've seen everything," said Osborn, with a laugh. "An apprentice lecturing the master craftsman."

"Not quite, John," said Gus. "Stan is much more than an apprentice—he's a darn good mechanic. But once in a while he . . . uh . . . latches on to a wild idea."

"Like closing the windows on a 90-degree-plus June morning?"

"That's part of it," Gus chuckled. "Stan's latest is that I lean too heavily on past experience when I look for the cause of trouble. That makes me old-fashioned. The modern approach is carefully controlled diagnostic tests—like the new electronic diagnostic centers."

"So that's what's behind the closed-window rigmarole," said Osborn.

"Yep," agreed Gus. "I've agreed to give

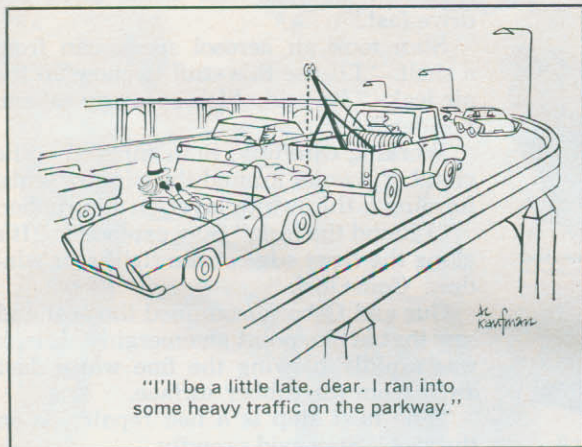
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his idea a try this week. Until Sunday, he's the chief mechanic; I'm just an observer."

"How's he doing?" asked Osborn.

"It's Thursday," said Gus, "and he hasn't asked for help yet.

"Actually, a lot of what Stan says makes sense. He's compiled a thick file of trouble-shooting service notes that will—according to him—let him design a diagnostic test to pinpoint any conceivable trouble, once he knows the symptoms."



"Sounds like a promising idea, Gus," said Osborn.

"Maybe so . . . maybe so," said Gus.

"**Not you, bud!**" bellowed Carl Andrews. "I want to talk to the real mechanic—Gus Wilson. Is he in the front office?"

Stan sidestepped quickly as the big man moved past him like a bulldozer and threw open the office door. Gus was finishing his lunch, and he barely had time to swing his feet off the desk before Andrews threw down a small slip of paper in front of him.

"That's a bill marked 'paid in full,'" he said loudly, "for the valve-adjustment job your assistant says he made on my car yesterday."

"Says he did?" Gus screwed his face into a puzzled frown. Across the office, standing in the doorway, Stan shrugged his shoulders.

"But . . . I . . . did do it," he sputtered.

"Then you didn't do it right," growled Andrews. "The engine still ticks like a

cheap watch, and it idles like a sick cement mixer." He leveled an accusing finger at Stan. "The way I see it is that you thought you could take advantage of a woman driver."

Andrews turned toward Gus. "My wife brought the car in," he said. "I told her to ask for you, but your assistant told her that he was handling the service department this week."

"That's true," Gus admitted, "but . . ."

"But nothing," Andrews interrupted. "He botched the job. Either you personally set it right, or I want my money back—now! My car's outside."

Stan was slightly crestfallen, but he stuck to his guns: "Gus, I know how to adjust valves. They were on spec when Mrs. Andrews picked up the car."

"Maybe something else is wrong?" Gus suggested.

"Impossible," said Stan emphatically. "According to the diagnostic tests I performed, the trouble has to be a misadjusted valve gear."

"He doesn't hear too well, does he?" said Andrews sarcastically. "Like I said, the trouble is still

right there."

Gus walked to the cash register and pressed the "no sale" key. He spoke to Stan. "It's up to you. If you prefer, I'll refund this man's money."

"No . . . I . . . uh . . . I guess you'd better look at the engine," Stan finally said.

Andrews' 1969 Dodge Dart GTS sat idling in front of the large overhead door to the service area. Even from 10 feet away, Gus could hear the characteristic tick-tick-tick of an improperly adjusted valve train, combined with the irregular chugging sound of a rough idle.

"I didn't get a chance to road-test the car last evening," Stan admitted.

Gus wheeled the car into the service area and raised the hood, revealing a big V-8 engine shoehorned into a compact engine compartment. He reached into his tool box for a stethoscope, and methodically applied the sound pick-up to different points along the two valve covers. After listening for a few moments he shook his head.

"This racket sounds just like tappet

noise to me, Stan," said Gus "Are you sure you adjusted all of the valves to specification?"

Stan nodded glumly.

"Okay then," said Gus positively, "the trouble must be somewhere else. Kill the ignition and we'll have a look."

It took less than five minutes for Gus and Stan to remove the two valve covers. Gus wiped the oil film off the left cylinder-bank valve gear, and examined the exposed rocker arms.

"Hand me the magnifying glass, Stan," said Gus, "I think I see . . ."

"Yup," he said a moment later, "two of the rocker arms are badly scratched just below the valve-stem bearing face—and it looks like the scratches were cut by the valve springs."

"What could cause that?" asked Stan.

"Engineers call it 'valve-spring to rocker-arm interference'. Let's see if it's really happening," answered Gus.

He disconnected the center high-voltage cable to the distributor to prevent the engine from starting, and then directed Stan to turn the starter switch. As the engine cranked over, Gus watched the two suspect valve springs periodically scrape against their adjacent rocker arms—each scrape sounding a metallic tick.

"One of the arms on the right cylinder bank is also scraping its valve spring," Gus explained later. "The three working together make the clicking sound."

"What about the rough idle?" Andrews asked.

"I can answer that one," said Stan eagerly. "When the rocker arms scrape against the springs, valve timing is upset—the valves stay open a fraction of a cycle

longer than they should. That affects the breathing of the three cylinders and they run rough."

"Right," agreed Gus. "The effect is most noticeable during idle. At high speeds the good cylinders act to swamp out—and disguise—the roughness of the other three."

"Can you adjust the rocker arms?" asked Andrews.

"Nope," replied Gus. "The only cures are to either replace the three arms, or to grind away the interfering surfaces on the original units. Either way, it's a warranty job on a car this new."

Shortly after Andrews drove away, Stan appeared in front of Gus's desk carrying a tall stack of leaflets.

"Hey, boss," he grinned. "Want to trade 20 pounds of service notes for 20 years' experience? My tests pinpointed the location of the trouble as the valve gear okay, but they couldn't have given me the right answer."

"Why so?" asked Gus.

"Because I never heard of rocker-arm to valve-spring interference before this afternoon.

"Gosh, there must be lots of mechanical troubles that cause weird noises—noises I couldn't diagnose simply because I've never heard 'em before."

"You're probably right," said Gus. "Your 'comprehensive' tests won't really be comprehensive until you have enough experience to recognize all of the answers the test could produce."

Stan's face brightened. "Sure," he said, "before I can diagnose a sound, I need a lot of sound experience." PS

Rugged three-wheeler does double duty

This odd-looking little run-about can be used for work or play. It will carry a driver, two passengers, and a quarter-ton load over rough terrain or on the highway at a top speed of 40 m.p.h. Made in England, the Lantrac weighs 750 pounds, is equipped with low-pressure tires, and powered by a 250cc, two-stroke, air-cooled engine.

