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Diving Artillery-

By Hickman Powell - PAGE 90

Save Your Car-

How to Make It Last



"Hey! How you fixed to help a guy out?" "Out of what?" queried Gus



GUS has an "easy" day

That's What Joe Clark Thinks, But Then All That
Joe Has to Do Is Sit and Make Out Monthly Bills

By MARTIN BUNN

[T was close to nine o'clock on a cold, sunny, late-winter morning when Gus Wilson drove his ancient and immaculate roadster into the Model Garage's shop. That's late for Gus, but he's been coming in a little late most mornings recently—he's been staying on at the shop every evening for the past month or so, working out a contraption that he's going to send to the National Inventors Council down in Washington with what we all think is the well-founded hope

that it will help along the good work of making the Axis considerably less of a nuisance than it is at present.

Wally, the grease monkey, looked up expectantly from the inner tube he was patching. "Hi!" Gus said briefly. From the office came the sound of Joe Clark's industry as he slowly typed out the customers' monthly statements. A moment later he stuck his thin face in at the shop's office door, his eyes expectant behind his rubber-tired specs. "Get it yet, Gus?" he demanded.

"Nope," his partner told him. Joe looked

disappointed. So did Wally. Gus silently filled and fired up his pipe and began to shift into his work clothes. Part way through the job he stopped with overalls half on and half off and sat motionless staring at the shop wall.

"Got it?" Joe and Wally demanded in chorus.

"No!" Gus snapped.

The rest of Joe Clark's anatomy followed his face into the shop. "You can't keep this up!" he exclaimed. "A man can go without his natural rest for just so long and no longer. You've been working here until two or three or four o'clock in the morning every night for the last three weeks—I know, because Jerry Corcoran patrols this road at night now, and he told me. You got to take some thought of your health, Gus. You got to remember you ain't as young as you used to be, and—"

That one prodded Gus out of his abstraction, and he laughed. "Nope," he admitted, "I'm not as young as I used to be. So what? I can work longer on a stretch than I could when I was twenty, and get a darned sight more accomplished in the same length of time. Habit, I guess it is, mostly—I've been working for a whole flock of years. Darn it, Joe, what gets my goat is that I've *almost* got it! If I only can iron out that one last little kink, that gadget will do its job! Oh, well, I'll get it. Tonight, maybe."

He looked around at the cars in the shop. "This ought to be an easy day. All nice, straightaway jobs—the sort of work that I can make Wally here do the most of. Go on back to sending out the bad news, Joe, and stop fussing about me." He finished pulling on his pants, and gave his partner a friendly dig in his skinny ribs. "Scram out of here! You're worse than an old woman."

Joe shrugged his shoulders helplessly and went back into the office. Gus puffed gray smoke for half a minute, and then asked Wally what he was working at. Wally had just started to tell him when a voice said:

"Hey, Mac! How you fixed for time to help a guy out?"

Gus looked in the direction of the open shop door and saw that the owner of the loud voice was a big-chested young fellow who wore an expressman's cap tilted over his left eye. "Help a guy out of what?" he queried.

The expressman grinned. "Out of trouble," he supplemented. "I've got a rush delivery to make up in Providence—war material with priority labels plastered all over it—and my engine's missing something fierce. I'm scared to take the

time to get it fixed, but I'm more scared to go on with it the way it is."

"Drive her in and we'll have a look," Gus directed.

The expressman drove a light truck into the shop. Its engine was sputtering. Gus quickly checked the spark plugs and the ignition. He could find nothing wrong with either, but there was no doubt that the back two cylinders were missing. He got out the tester and checked the compression. It wasn't quite as high as it should be, but all the cylinders were about the same, and it wasn't nearly low enough to cause missing.

Gus scratched his head reflectively, and then looked at Wally. "Here's a job for you to sharpen your wits on, Kid," he said. "Everything seems O. K., and yet the back two cylinders aren't doing their job. How come?"

"Carburetor?" Wally suggested, not too hopefully.

"Nope," Gus said. "If the carburetor was screwy the other cylinders would buck once in a while. Let's have a look at the intake manifold. Looks all right. We'd better check the vacuum."

Wally brought out the vacuum tester, and Gus took off the windshield-wiper hose and replaced it with the tester hose. The tester showed poor vacuum. "The wiper hose leaking might cause that miss," Gus said, "although I don't think that's what it is. But try a new hose."

The new hose didn't make any difference in the performance of the engine. "I'll have to road-test this bus," Gus decided. "Come on, Buddy, we'll take a little ride."

When they came back after a short run up the road Gus was looking puzzled and the expressman was looking worried. "She misses worst when she's pulling on the



Water spouted from the panel. "Golly!" cried Gus. "I'd have been less surprised to see elephants!"

hills," Gus said. "But I still don't see. . ."

"Look here, Mister, I've got to get to Providence in a hurry," the express driver broke in.

"Take it easy," Gus advised. "Before you can fix anything you've got to make sure what's wrong. The first hour you're on the road with your bus running right you'll more than make up the time you're losing now. Give me that vacuum tester again, Wally. I've got an idea."

He again substituted the tester hose for the wiper hose. But this time the engine began to run smoothly and without missing, and the vacuum reading was high.

"Huh!" Gus grunted. "We've found *where* the trouble is, but we've still got to find out *what* it is."

He did some hard thinking for a few seconds, and then pushed the tester hose a fraction of an inch farther up on the vacuum outlet. At once the engine began to miss.

"That's the tip-off!" Gus said. He raised the hood and began a rapid examination. "Here it is!" He pointed to the brass outlet for the wiper hose on the intake manifold near the back cylinders. "That outlet is cracked around its base, and that makes the cylinders draw in too much air and not enough gas. This engine is rubber-mounted. The old wiper hose is a little too short—some one has cut pieces off it, two or three times, and it was stuck to the outlet. So every time you speeded up your engine suddenly, or the truck hit a bump in the road, there was a jerk on this cracked outlet. Those repeated jerks made it crack more and more, until the opening was large enough to let the lean mixture into the back two cylinders, and that caused the missing and the loss of power on hills. Cheer up, Buddy—it won't take long to put in a new outlet."

After the expressman had driven off with his priority load, Gus and Wally worked peacefully on a transmission job until about three o'clock. Then a horn honked outside and a business coupe of popular make and current vintage was driven in and stopped short. A peevish-looking man jumped out.

"Name's Hopkins," he snapped. "I travel for a living, and I have to do it fast. Last couple of days I haven't been able to get more than fifty out of my car after three o'clock in the afternoon. What's—"

"Wait a minute!" Gus interrupted him.

"What'll your bus do *before* three o'clock?"

Hopkins grinned. "Seventy—and up," he said. "Until about three o'clock. What's the answer?"

"It's somewhere in the car," Gus said. "Want me to look for it?"

"Yes!" Hopkins grated. "But don't waste time looking in places I've paid a half dozen other mechanics to look in the last two days. The fuel pump is O. K. There's nothing the matter with the carburetor. The coil is perfect. So is the condenser. Same with the distributor and the spark plugs. The gas line has been checked. Well—what?"

Gus scratched his ear reflectively. "Get your tank filled any particular time?"

"Yes," Hopkins said. "Last thing in the afternoon."

Gus got a quart can, filled it with gasoline, and put it on the floor of the car. Then he took a length of rubber tubing, connected one end of it to the fuel-pump inlet, and dropped the other end in the can. "Step on her," he directed. The engine ran perfectly. "Speed her up!" With the throttle open it ran as perfectly.

"Switch her off," Gus said. "The trouble is in your gas tank, I'll have to remove it."

"You will, hey?" Hopkins said grimly. "Suppose the trouble *isn't* in the gas tank?"

"Then you don't pay anything for the job, and I buy you a quarter cigar," Gus told him.

Hopkins grinned. "You're a sport," he said. "Go to it. I'll be back in an hour."

Gus removed the tank from the car, observing a very slight inward bulge in the tank bottom. "Good heavy rock must have flown up from a wheel to do that," he remarked to Wally as he worked.

He removed the outlet and fuel-gauge assembly from the top of the tank. Then with a ruler he measured the distance to the tank bottom and compared it with the length of the riser pipe. Then he laughed. "That pipe which feeds the gas from the bottom of the tank to the fuel line must sit right on the bottom when the tank is half empty. When it's full, the weight of the

gas pushes the metal bottom down just enough to let the gas run into the pipe. Take over, Wally."

After that things went along smoothly until nearly five o'clock, with Gus doing more thinking about his defense gadget than about the work he and Wally were doing.

Then Jim (*Continued on page 218*)

GUS SAYS:

When motoring was still a novelty, drivers would enjoy bragging if they got good gas or fire mileage. Then they got out of the habit. It was pretty good sport, though, and it's a good time right now to revive the old pastime!

Tough *BUT OH SO GENTLE*



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IN CARS, TRUCKS AND TRACTORS

Gus Has an Easy Day

(Continued from page 144)

Jelliff, who owns the local coal yard, drove in with a scowl on his red face. "Something's gone wrong with my generator," he growled. "The needle of the ammeter won't move off the zero mark. Get it fixed up in a hurry, will you, Gus? I'm busy as the very devil, and I need this car. How long will it take?"

"That depends on what's the matter with it," Gus told him. "Leave your car here. I'll get right at it."

Gus removed the generator from the car, and checked it carefully. Finding nothing at all wrong with it, he reinstalled it, started the engine, and looked at the ammeter confidently. The ammeter hand stayed at zero.

Gus switched on the lights. The hand continued to stay at zero.

Gus swore. Then he checked the wiring behind the dashboard thoroughly, and again started the engine. The hand stayed at zero.

This time Gus didn't swear. Instead, he lighted his pipe and contemplated the instrument panel. The oil gauge, temperature indicator, and gas meter, with the ammeter below them, were inclosed in one group behind a glass face set in flush with the dash.

"Ammeter must be busted," Gus said to himself. Reaching under the dash he disconnected its wiring, removed the screws which held it in place.

Even with the screws removed, it took quite a yank to get the ammeter free. When it came, it came suddenly. And pouring after it surged a stream of water.

"By golly!" cried Gus. "I'd have been less surprised to see pink elephants pop out!"

Wally had been watching. "First time I ever saw anything like that either," he observed. "Where did it come from?"

"It must have come from a windshield leak," Gus told him. "The water that leaks in runs down inside the instrument case. Enough water must have leaked in to bring it up into the lower part of the ammeter and put it out of commission. And I've wasted the better part of an hour!"

Along about six o'clock Joe Clark came into the shop to collect the day's time-and-material slips. After glancing over them, he remarked that he was glad to see that Gus had had a nice, easy day.

Gus glared at him. Then he laughed. "Sure," he said, "it was a regular rest cure for the old bean. Of course, there was that—" He broke off, and stared at Joe.

Joe stared back. "Got it, Gus?" he asked. "Scram!" Gus yelled. "Yes, by gum, this time I think I've got it!"