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Gus Prescribes an Oil Change

By Martin Bunn

JOE CLARK'S voice over the wire was waspish. "That highbinder charged me twice what the job was worth to put in those new rods—and when he got 'em in the engine wouldn't even turn over. I told him that I wouldn't pay him for work that hadn't done any good, and he said he'd hold the car until I did pay him. Then I told him—"

The thought of Joe Clark on the customer's end of an argument over a repair-job bill made Gus Wilson grin. "Never mind what you told him. What did you *do*?"

Joe's voice went up three notes. "Do?" he yelled. "What could I do? I had to pay him, of course. But I wouldn't let him

touch the car again. A fellow helped me push it out of his shop; now it's standing in the street. The engine won't start, and the next garage is 10 miles away. They'd charge plenty for a tow and probably won't be any better than this nitwit! You or Stan'll have to come with the wrecker and tow me home."

"That's quite an order," Gus hedged. "Where did you say you are?"

Joe named, in highly uncomplimentary terms, a very small town.

"That's well over a hundred miles from here," said his partner after a brief tussle with a road map. "It's almost closing time now, and it'll take most of the night to bring you in . . . Well—O. K. I'll send Stan. By the way, Joe, is there a college handy to that burg you're in?"

"How'd I know?" Joe yelled. "And what difference does it make?"

"I was just thinking that while you're waiting for Stan it would be a good idea to take a quickie course in mechanics!"

The receiver was slammed on its hook

at the other end of the line. Gus grinned. Then he went serious. He was a prey to the vague uneasiness that assails every conscientious mechanic when he hears that a car he has worked on has conked out. "I checked Joe's bus before he started on this trip to Pittsburgh," he thought, "and it was in good shape—considering it's a '39 and has clocked over a hundred thousand miles. Well—we'll see."

STAN and Joe reached home sometime in the course of the night. When Gus got down to the Model Garage next morning he found his partner's car in the shop and its owner, still simmering, waiting for him. "You're a swell advertisement for our business," Gus grinned. "What happened?"

"Nothing happened until I'd got three-quarters of the way home," Joe growled. "I was driving along at about forty with the car running swell—just like it had been running ever since I left here—all of a sudden there was the damndest clatter you ever heard. The sound seemed to come from the crankcase. I figured it was a burned-out connecting-rod bearing that was just about to let go. This happened 'way out in the sticks, but I spotted a sign saying there was a garage and repair shop 15 miles further on. I decided to take a chance that the bearing would hold out until I got there. The clatter didn't let up, but it didn't get much louder, and I made it."

"The fellow who ran the garage could probably find a flat tire if you pointed it out to him, so to save time I said I thought it was a burned-out rod bearing. After he fooled around for 15 minutes he reckoned I was right. I let him go ahead and fix it, and went down the main drag to get something to eat. When I got back he had the crankcase all unbuttoned. He said that all six rods were bad and I'd have to have new ones. Frankly, they didn't look too bad to me, but I was still hoping he knew what it was all about, so I asked what the job would cost. He quoted more than twice what we would have charged for it, and we had an argument. But in the end I told him to go ahead."

"He sent his grease monkey 20 miles to get the rods, and when he finally got started I could see he was strictly a left-handed mechanic. At last—late in the afternoon—he got the rods installed and the engine back together. Everything was fine—except that she wouldn't run! That reformed black-

smith stood there scratching his head. He suggested one thing after another that might be the matter, but I could see he was up a tree. I told him that if he found out what was wrong and fixed it I'd pay him for the job, but I wasn't going to pay for putting in six new rods that weren't needed. We had another argument. He threatened to phone the constable and have my bus held, so in the end I had to come across. By that time I was so sore I wouldn't let him try anything else. I found a fellow to help me roll the car out into the street, and then I called you . . . What do you think can be the matter with the old bus?"

"Soon find out," Gus grunted.

HE RAISED the hood, and went over the engine. While he was doing it Stan came in yawning widely. Gus told him to touch the starter. "No use, boss," Stan protested, but he did as he was told.

The starter ground over with no response from the engine, not even a cough. Deftly Gus checked the fuel and ignition systems; both were operating properly. He thought for a moment and then, on an impulse, removed the valve cover plate and touched the starter solenoid. As the engine was cranked over, Gus was startled to find that the valves remained motionless. Frowning as he worked, he took off the housing on the camshaft timing gear.

"Here's the trouble!" he exclaimed. "Look—five teeth have been stripped off this timing gear. I wonder what caused that? It's made of laminated plastic, so it'd probably give before the steel crankshaft gear, but—hey! The jet that's supposed to spray oil in here is plugged solid!"

He cleared the oil passage with a piece of wire, and rolled what he got out of it between his thumb and forefinger. "Solid sludge," was his verdict. "It stopped lubrication of the gears; heat and friction did the rest. I wonder—"

He got an old drinking glass from his bench; washed it, drained a little oil from the crankcase into it, and held it up to the light. "Your oil is foul with sludge and muck," he said. "No wonder you had trouble—the surprising thing is that you didn't have more of it." He looked hard at his partner. "I told you to fill up with fresh oil before you started. Did you forget to do it?"

"Of course I didn't forget to do it!" Joe snapped. "What do you think I am—a

dope? Why, I even used heavy-duty oil—that new premium stuff we got in just before I left. The oil-company salesman had been telling me how it keeps sludge and such stuff suspended instead of letting it settle in the oil pan, and I figured that using it on my trip would be a swell way to clean out my engine. When I got to Pittsburgh I checked the oil level. The dip stick was as shiny as new—the oil had cleaned all that sticky brown stuff off it, so I knew it was doing the job the salesman said it would.”

Gus stared at his partner. “And you didn’t change the oil?”

Joe looked surprised. “No. Why should I? I’d gone under 1,000 miles and there was plenty in the crankcase. What’s all this about, Gus? Aren’t the new premium oils any good?”

“Sure, they’re good,” Gus assured him. “So is dynamite or TNT or atomic power—if you know how to use ’em. But premium, or heavy-duty, or detergent oil—they all mean pretty much the same thing—can cause a lot of trouble if you don’t use it right. So much trouble in fact that some of the oil companies aren’t recommending it for passenger cars.”

Joe looked horrified. “That’s bad!” he said in a worried voice. “I haven’t sold any of it yet, but I’ve talked it up to several customers. We’ll be behind the eight ball if any of them take my word for it and get in trouble, the way I did.”

“That’s all right,” Gus reassured him. “You can go right ahead recommending it for cleaning out engines, and for all-the-time use by drivers who make long trips at high speed—so long as you make darn sure that the people you sell it to know how to use it.”

JOE pointed to the broken timing gear. “That doesn’t look as if I know how to use it. If it’s that tricky—”

“There’s nothing tricky about it,” Gus interrupted, “if you stop to think that a detergent oil is just what it claims to be—a purging oil. While it lubricates, it cleans off the sludge and other muck—the waste products of combustion—that accumulate on the innards of an automobile engine. Usually there is a dispersant in these oils, a chemical that is added to keep dirt and sludge suspended, instead of allowing them to settle into the oil pan. What you’ve got to remember is that the detergent cleans the accumulated sludge off the engine parts

but not out of the engine until it is drained off with the oil.

“Your car has been driven over a hundred thousand miles, mostly short runs, without ever having its oil pan down, so its engine must be pretty dirty. I’ve been meaning to clean it up for you, but since we’ve always babied the car and it continued to run well, I never got around to it. You put in detergent oil and then drove from here to Pittsburgh and three-quarters of the way back—say 750 miles. That long run gave the purging oil a good chance to do its job, and it did it. The trouble was that it cleaned so much sludge out of the engine and into the oil that the oil passages couldn’t digest it. They clogged up. The jet that sprays oil between the crankshaft drive gear and the camshaft gear was plugged solid with hard, high-temperature sludge. If the resulting breaking of the timing gear hadn’t laid you out on the road, you probably would have burned out a bearing—the bearing lubricating tubes are nearly filled up.”

“And still,” Joe growled, “you say there’s nothing tricky about detergent oil!”

“There isn’t,” Gus said. “Not if you change it before the sludge it has cleaned off the engine parts has a chance to do any damage. For an engine that’s just average dirty, the oil should be drained, and the crankcase flushed, after about 300 miles, and again after another 500 miles. But for an engine that’s really dirty, the first change should be made after only about 100 miles. You can’t do any harm by changing the oil too soon—but you can do a lot of harm by not changing it soon enough.”

“You’ve got something there,” Joe admitted. “Now if you can get my bus rolling, maybe I’ll take a little drive.”

“What for?” Gus asked apprehensively. “You aren’t figuring on trying to collect the dough you spent for the con-rod job?”

“Naw.” The co-owner of the model garage smiled sheepishly. “We got a college right here in town, and I’m thinking it’s about time I took that quickie course in mechanics you’ve been talking about.” **END**

