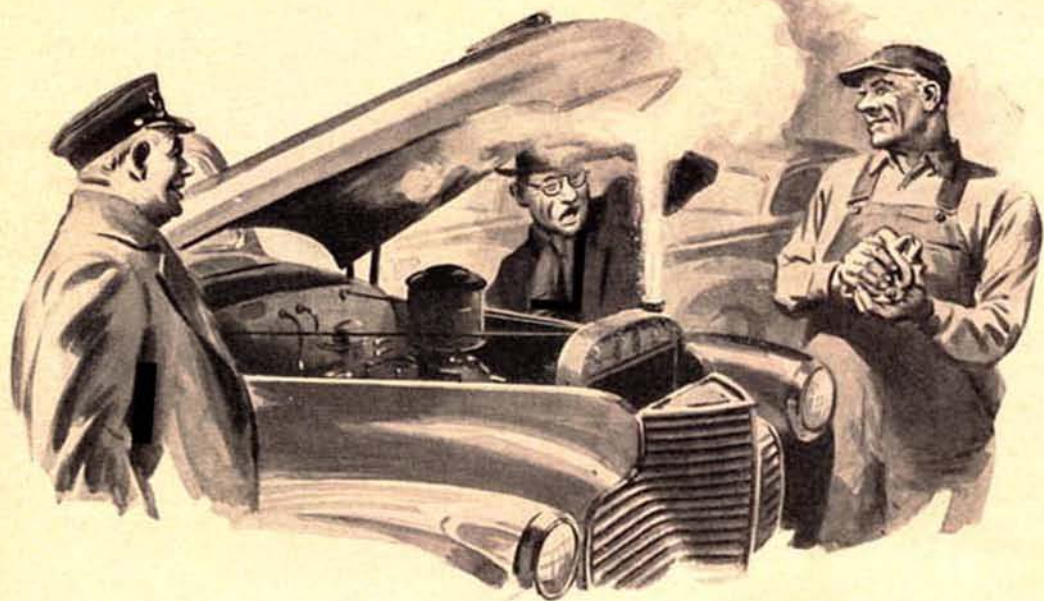


"You fellers have cheated me!" old Silas yelped. "My radiator all froze up—busted, likely!"



GUS Gets Ready for Winter

SNOW sweepers swished on the road outside as Gus Wilson shed his ulster in the shop of the Model Garage on the first real winter morning of the cold-weather season. A heavy fall of the white stuff early the evening before had been followed by the mercury taking a nose dive, and now at eight o'clock of a sunny, windy morning the thermometer outside the office door registered only ten above zero.

Gus's partner, Joe Clark, was grinning a good morning from the office door. "You'll have a bad case of telephone ear by nine o'clock," Gus told him. "All the customers who as usual didn't remember to take the precautions we advised will be phoning us to get their frozen-up busses started. It's always that way the first real cold morning of the winter."

"Sure is," Joe agreed. "It's hard on the ears, and it makes you wonder why the Lord made so many people downright careless, but it's good for our business. Remember that morning when—"

He was interrupted by the honking of a horn outside the shop doors. Then someone

shouted "Hey, you, Gus Wilson—open up! It's colder'n heck out here!"

"That's Ez Zacharias," Gus said as he unlocked the double doors. "I didn't expect he'd be the first one to holler for help. Usually he's a pretty wise bird when it comes to keeping out of avoidable car trouble."

Ez usually covers his R.F.D. route in a smart-looking sedan, but this fall he invested in a light truck, three or four years old but in A-1 condition, for use when the dirt roads back in the country get bad or, around the holidays, when he has especially heavy parcel-post deliveries to handle.

He drove this truck into the shop, leaned from the seat, and scored a V on Gus's waste box with an active-service charge of tobacco juice. "By gum," he said, "the feller who sold me this darn truck took me fer a sucker, and he didn't make no mistake!" He climbed out, pushed his postman's cap away back on his shaggy head, and shook a big and hairy fist at the vehicle. "First time I ever seed a automobile that'd run ahead smooth as velvet, but wouldn't

Now look what happens, the first cold day we have! My radiator all froze up—busted, likely!"

"No, your radiator isn't frozen, and it isn't busted," Gus reassured him. "But your hose is leaking so badly that your cooling system is darned near dry."

Ez Zacharias began to laugh—and when big Ez laughs the walls shake. "Tell the whole story, Mr. Barnstable!" he scoffed. "I was in here when Joe Clark argued you into buying that antifreeze, and I heard him warn you that your hose was so rotten that you'd probably lose most of it. That's my idea of cock-eyed economy—wasting pretty near five dollars' worth of antifreeze to save a quarter for a new hose!"

Old Silas glared at Ez and turned to Gus. "I'm depending on you to do the square thing about this," he wheedled. "I ain't had any use out of that antifreeze, so it would be only fair for you to replace it without charging me anything. But I ain't asking you to do that—make it half price for the new antifreeze, and fill her up."

Gus laughed. "No smoke, Mr. Barnstable," he said good-naturedly but very firmly. "Joe warned you that your hose was rotten. You didn't take his advice to put in new ones, so you'll have to stand the loss. I'll install new hose and put in a fresh filling of antifreeze if you want me to, but you'll find both items charged on your bill at our regular prices."

"You're the hardest man to do business with I've ever run up against in all my born days," Silas growled. "No give-and-take spirit at all. All right—have it your way. I'll be back for my car this afternoon!"

"Serves the old skinflint right," Ez observed after Silas had left. "He's so mean he—"

"He can't help being a penny-pincher. He was born that way," Gus said. "And, after all, the grief he gets into by being so tight is pretty much the same as the grief that a lot of other car owners bring down on themselves through plain carelessness. He's not the only man in this town who makes his winter driving hard instead of easy."

Ez settled himself comfortably on the end of Gus's workbench. "How come?" he wanted to know.

"The first thing you've got to have to

make winter driving easy," Gus explained, "is a cooling system that is tight as a drum. Antifreeze, no matter what brand of it you use, costs money, and there's no sense in pouring it into your radiator and then allowing it to leak out. That's bone-headed waste. And besides that it is mighty likely to result in serious damage to your engine. Before cold weather starts you should have your cooling system checked to make certain that your radiator doesn't leak, that your hoses are good and their connections tight, that the cylinder-head gasket is tight, and that your pump shaft is tightly packed.

"After you have made sure that your cooling system is tight, you should make just as sure that your radiator is clean—that it isn't clogged or half-clogged with rust, sludge, scale, or sediment. You can do that by flushing it out with a ten-cent can of the same sort of prepared noncaustic powder

GUS SAYS:

The drivers who put off getting their cars ready for winter are the ones who help me pay my income tax, so I really shouldn't kick. But I hate to see good machinery ruined, and nothing will ruin an engine block like ice. Get busy and check up on your antifreeze!

that's sold for keeping bathroom drains clear—you can buy it in any grocery store and in most garages. Run your engine until the water in the system is warm. Then pour the powder into the radiator, and run your engine for another fifteen minutes. Then drain the radiator, and flush it out once with warm water. Less than a half-hour's job—and when you have done it you know that your radiator is clean."

"I've heard a lot of arguments about antifreeze mixtures," Ez observed. "What's the best one, Gus?"

"So far as I know there isn't any best one," Gus said. "That's why we sell several of 'em. The more expensive ones are made of about ninety-seven percent ethylene glycol, with added ingredients which protect the cooling system against rust and corrosion. They don't evaporate or boil away, and you can drain them out of your radiator in the spring, allow the dirt to settle out of them during the summer, and then use them again the next winter.

"If your cooling system is tight, and you use the proportion of antifreeze to water recommended by the manufacturer, it will give your car absolute protection. Only the water in the radiator will evaporate, and if all your winter driving is short trips, so little of the water will evaporate that it won't need to be added to until spring. It's a good idea (Continued on page 237)

back up without goin' dead. Took me a good ten minutes to get backed out of my ga-rage, by hookey! Every danged time I put her into reverse she'd die down, start up again, hit a few times, and then quit like a yaller dawg on me! Take a look at her, will you, Gus?"

Gus got into the truck, stepped on the starter, and shifted into reverse. The truck ran smoothly over the shop floor, but the moment its rear wheels hit the snow-covered driveway outside, the engine sputtered, and then went dead. When he stepped on the starter again and shifted into low, the truck ran back into the shop without a miss.

"That's a new one on me," he said. "First time I've ever known a car to act like that."

Gus checked the points and condenser and found them in excellent condition. When he restarted the engine it ran smoothly. He again backed the car out of the shop. As soon as its rear wheels were on the snow-covered driveway he noticed that there was a lot of vibration—so much that he could feel the engine moving back and forth on its rubber mountings. As soon as he shifted into low speed the vibration ceased and the truck ran smoothly back into the shop.

When he raised the hood his eyes still were so badly dazzled by the glare of the bright sun on the newly-fallen snow that he could scarcely see the engine. That was why he noticed the faint flicker of a spark where the wire entered the condenser. When his sight returned to normal he saw that one of the strands of the wire had frayed loose, and that its ragged end was close to the condenser.

He examined the truck's rear end, and nodded when he saw that its spring suspension was like that used on some old-model passenger cars—a half conventional spring, with one of its ends connected to the frame and the other to the rear axle. Without further checking he replaced the frayed wire with a new one. "All ready to roll," he told Ez as he lowered the hood.

"Yeah?" the postman said. "What the heck was the matter with her?"

"A strand of frayed wire was hitting against the condenser and shorting your engine," Gus told him.

"What? That don't make sense," Ez object-

The Boss of the Model Garage Tells You How To Avoid Being Chased off the Road by That Old Man Zero Weather

By MARTIN BUNN

ed. "The engine ran swell except when she was in reverse."

"That's what fooled me," Gus said. "The answer is that, with this particular type of spring suspension, the wheels pulling backward in the snow cause a sort of bouncing motion. That motion makes the engine rock on its mountings, and that rocking brought the end of the frayed wire in-

to contact with the condenser and caused the short that killed your engine whenever you went into reverse in the snow. Get it?"

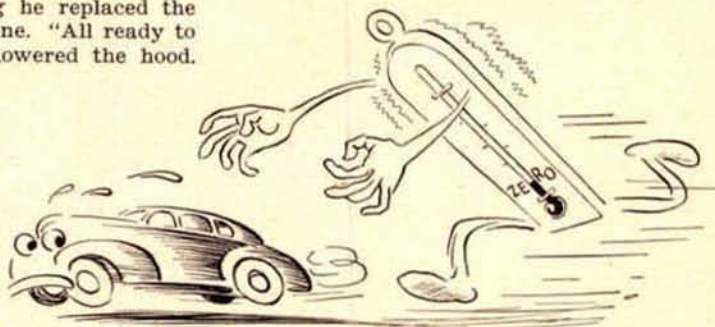
"I guess I do," Ez said doubtfully, and bit off a modest inch of coal-black plug. "Well, I better be gettin' along an'—hey, there's some guy who's in a real hurry!"

It certainly sounded that way. From outside came repeated squawks of a raucous horn. "Let him in, Harry," Gus directed the grease monkey. "If you don't, he'll knock our doors down."

Harry opened the doors. He had to step lively to get out of the way of a sedan which shot into the shop and came to a jarring stop. Out of it leaped old Silas Barnstable, looking even more like a bantam rooster than usual in the ancient seal-skin driving cap he was wearing. "Do something quick!" the little retired farmer squealed. "My motor's red hot and my radiator's b'iling over!"

Gus raised the hood and cautiously unscrewed the radiator cap, releasing a cloud of steam. "All right—you can switch off your engine," he told Barnstable. "You ran it close, all right! I'll bet there isn't more than a cupful of water left in your cooling system."

"You fellers have cheated me!" old Silas yelped. "That Joe Clark told me I ought to fill up my car with a lot of high-priced antifreeze, an' I was fool enough to do it."



Gus Gets Ready for Winter

(Continued from page 150)

to get a trunk tag and write on it and then tie it on your filler cap so that gas-station attendants won't add unneeded water. If you do any long-distance driving during the winter, you should have your radiator level checked about once a month."

"I know those \$2.65-a-gallon antifreezes are good," Ez said. "But how about the cheaper ones? A feller was tellin' me the other day that he only pays a buck a gallon, an' that the stuff does the work."

"Antifreezes are like most other things—you get just about what you pay for," Gus replied. "The base of most of the dollar-a-gallon mixtures is high-test methanol—wood alcohol—with something in it to prevent rust and corrosion. But methanol evaporates—which means that you have to keep watching your mixture, and keep adding to it."

"How about plain alcohol?" Ez wanted to know. "We always used to use it, and it did the trick."

"It will keep water from freezing, all right," Gus said. "But engines run hotter now than they did only a few years ago, so plain alcohol is likely to boil away. The only advantage it has over the antifreeze mixtures is that its first cost is lower—but you have to add to it so often in the course of the winter that in the end it costs you as much as the made-up mixtures, and you have a lot more bother with it."

Joe Clark's voice came from the office: "Hey, Gus. Send Harry over to the golf club with the wrecker. And Mrs. Miller says—darn that telephone!"

Gus grinned. "Time to go to work!" he said.

Ez looked at his watch. "Holy cats!" he yelled. "An' me with my mail not made up!"

"Roarless Road" of Asphalt Spares Motorists' Nerves

ROARING of tires on asphalt roads is said to be eliminated by a new kind of surfacing being tried out in Massachusetts. On a seven-mile stretch between Petersham and Barre, "pea stone" was used instead of the type of stone usually employed for surfacing. Inspectors say that the new surface is equal to the old in quality and speed, while sparing motorists the nerve-racking roar usually produced by tires on asphalt roads. If the test proves successful, the new construction plan will be widely used in future road building, it is predicted.

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