

FILTER PROTECTS ENGINE IN DODGE

Removal of Abrasive Matter from Oil Reduces Wear and Tear

How the oil filter works and whether it is working properly is of interest to every motorist who wants to secure over many thousands of miles of service, freedom from excessive wear and from need of adjustments or replacement according to Ernest Bonesteel of the Bonesteel Motor Company, local Dodge Brothers dealer.

"Too many owners," says Mr. Bonesteel, "are briefly informed at the time of purchase that an oil filter is part of the standard equipment of the new car but are not told how important the filter is in prolonging engine life. Sometimes the salesman tells the buyer that the engine oil filter is 'engine life insurance,' but too often the owner overlooks the fact that in time the policy lapses, that is, the filter becomes no longer effective and should be replaced.

"Some manufacturers recommend replacement at the end of a specified mileage, some when a test indicates that the oil no longer flows through the filter sufficiently freely—the result of gradual accumulation of sludge and abrasives removed from the oil circulating system.

"Tests made in the laboratory indicate clearly the extremely harmful nature of the material which the filter removes. If the black tarry looking cloth sack removed from a new car is burned and the ash or non-combustible matter analyzed it is found to consist of sand and gritty matter as well as small particles of metal largely what is worn from the cylinder walls and piston rings during the breaking in.

"The crankcase breather and the carburetor air filter exclude much dust which might otherwise enter the engine. Any fine material which does get in and becomes mixed with the oil is trapped out by the filter. Otherwise the fine dust would circulate again and again, and cause wear of cylinder walls, pistons, rings, bearings and in fact all parts inside the engine which turn or slide one against the other.

"The oil filter should be tested every two or three thousand miles by the mechanic in the approved service station or by the owner. The method of testing is very simple, consisting of merely opening a small valve in the oil filter outlet pipe. If the oil flows freely when the engine is running slowly the filter is good for further service but if the oil fails to flow or drips slowly even when the engine is warm and is speeded up until normal operating pressure is shown on the oil gauge on the dash the filter has become clogged and should be replaced.

"The filter is conveniently located where it can be removed as a unit by simply loosening the two oil tube connections with a wrench and one clamp bolt with a screwdriver. In fact changing an oil filter is just about as simple as changing a spark plug.

"As the filter permits the driver to use the oil two or three times as long as would be safe to use unfiltered oil it saves the cost of replacement several times over during its life—but if neglected until it becomes entirely clogged it can no longer remove tarry and gritty matter from the oil and increased engine wear results."

Dame Motorist Again Vindicated As Driver

Dame Motorist is again vindicated as a careful driver. A recent study of one thousand fatal motor vehicle accidents in San Francisco showed that fewer women than men were involved in such accidents, in proportion to the number of men and women drivers, according to the American Automobile association.

It was brought out that in 910 of the cases investigated the drivers were men, as compared with 46 in which women drivers were involved. Forty-four were unknown due to hit-and-run cases.

California traffic authorities, who made the analysis referred to, estimate that 20 per cent of those holding drivers' licenses are women. On this basis, women constituting only one-fifth of the number of drivers, were responsible for a little less than 5 per cent of the fatal accidents.

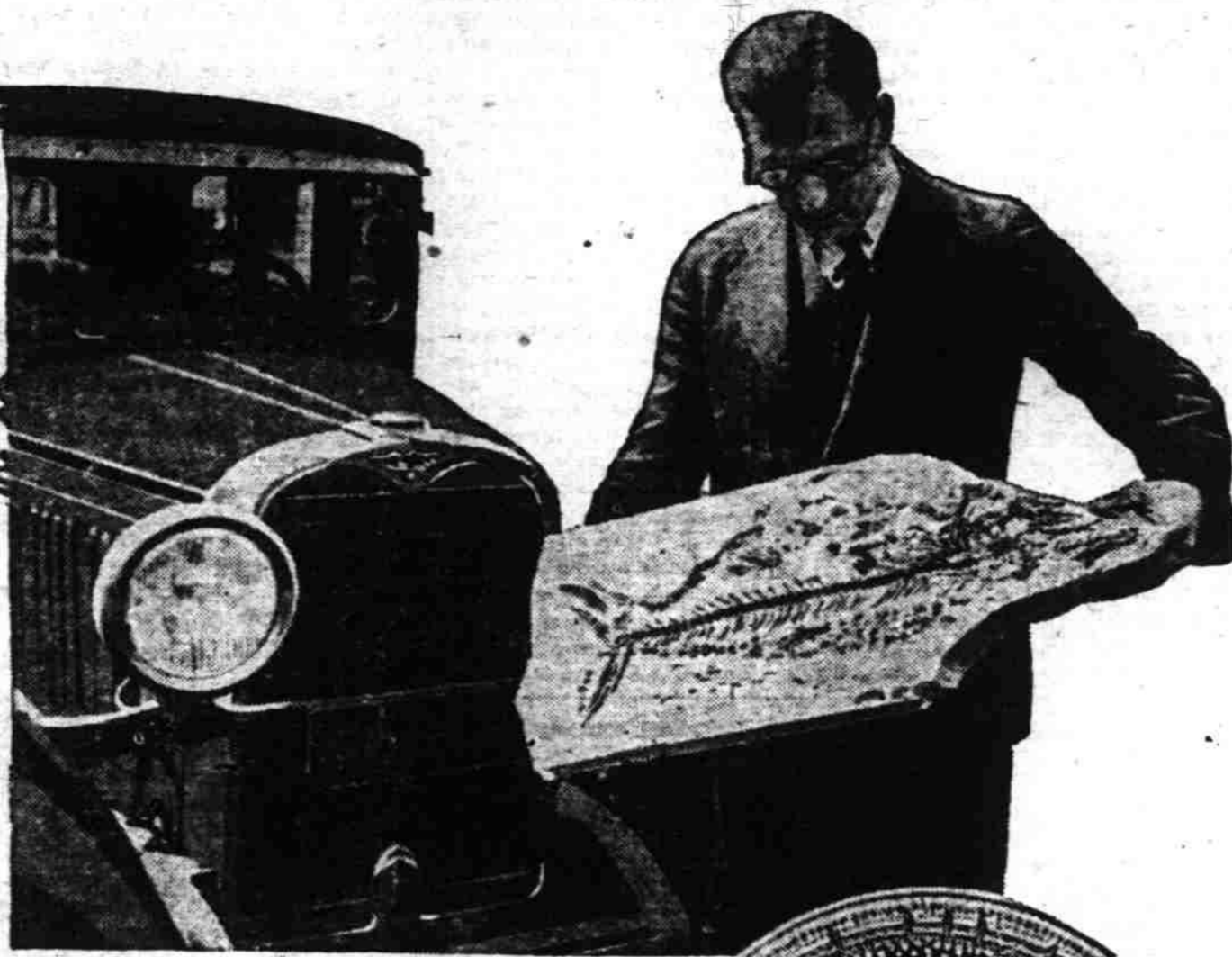
BUICK FIRM HAS MANY EMPLOYES

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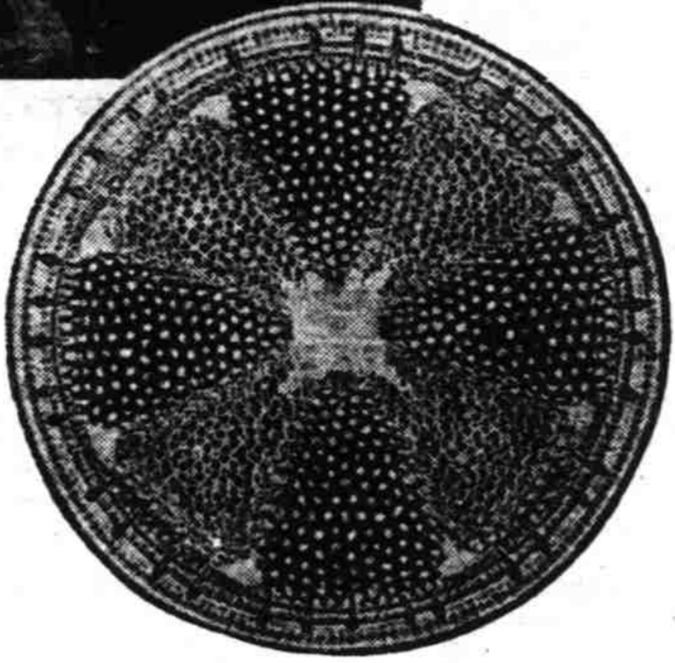
All of this development has paralleled closely that of Buick. The five years subsequent to 1924 saw production of 30,207 Buick cars, and established Flint definitely as an automobile manufacturing center. This production was more than quadrupled during the next five-year period, when 123,231 Buicks were made. The output for 1915 to 1919 inclusive was 481,948 and for the ensuing five years, 683,241. And the past three years have exceeded even this total, more than 700,000 Buicks having been built with two years of the five still to go.

The past two years have seen completion of one of the most important expansion steps in the history of Buick, a step involving the expenditure of millions of dollars to insure production which would keep pace with the growing demand for Buick cars. The decision to inaugurate the United Assembly Line, to erect a new and model foundry, and to provide central-

Petroleum Origin Explained



Fish, many millions of years old, leave imprint in slab of diatomaceous earth found near Lompoc, California. This Victory deluxe sedan, by Dodge Brothers, Inc., visited the place recently. Below is a diatom character, greatly magnified, of the Lompoc diatomaceous earth. From these tiny animals—1,000 of them are in one drop of water—comes the supply of oil in California.



headquarters for the entire engineering staff; all of which are now realized, was reached after long study of the automotive needs not only of this country but of the entire world.

Year after year Buick has registered a normal and healthy gain in its sales. Distribution of Buicks abroad has begun to pick up as domestic distribution quickened 20 years ago. Many of the first million Buicks went to foreign lands; more of the second million were sold abroad, and a far greater proportion of the third million which Buick now is building, are destined for export.

It is the conviction of Buick officials that even the banner year 1927, which saw the greatest business volume in Buick history, will be exceeded in the year now under way. Production is set at over 19,000 cars a month for this month, April, and the rest of the spring season, with every indication that it will reach plant capacity of 1-200 cars a day by midsummer.

FLIES FROM WEST TO BUY CHRYSLER

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March 14, but urgent business prevented his leaving Los Angeles until Saturday, March 10. There seemed to be no way of getting across the continent in time for his New York appointment, let alone stopping off in Detroit to take delivery of a car, but some one suggested the air mail and a new conception of the meaning of speed began for Mr. Church. At 8:00 o'clock Saturday morning, March 10, he boarded the government air mail plane and was the lone passenger on its eastbound trip.

Even for the speed loving engineer, the air journey was a revelation. The plane bucked a head wind through the mountains and across the Mojave Desert but Salt Lake City was reached at half past two that afternoon. By evening Cheyenne was behind the pilot

and his passenger as they streaked eastward along their beacon-blazed sky trail, and at 1 o'clock Sunday morning, 15 hours out of Los Angeles, the pair dropped down through a fog to the landing field at Omaha.

A break in the mail plane's routine was made necessary at this point because of the fog's density and a few hours sleep were snatched. At 10 a. m. Sunday the flyers once more took to the air. To find clear sailing they were forced to an altitude of eight or nine thousand feet for the rest of the voyage, and the fog was still below them when they felt their way down to the Chicago airport to take a desperate chance as they dropped through it to the ground.

"It was the greatest thrill I've had in many a year," said Mr. Church in Detroit, "when we came out of that fog and saw a thousand feet of clear air under us. I was afraid the fog went clear down to the ground, and if it had we ran a grave risk of smashing up in trying to land. But as it

HOW AUTOMOBILE BODY CONSTRUCTED

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number of unit assemblies, which include special building of the door frames. After the door frames are hung on the main body structure, the body is then ready for its outside armor of steel. Watching this operation, you would see vivid flashes of electric flame, as men weld together the outside steel panels to the staunch under structure. Wherever metal and wood come in contact, the special adhesive is used to eliminate body squeaks when the body is put into service.

"After the body panels are applied, metal finishers go over the entire body with electric controlled buffing equipment, to eliminate any foreign particles and blemishes. This insures a perfect finish for the first priming coat preparatory to the lacquer.

"Preparing Chandler bodies for lacquer is a painstaking operation. This first primer coat is put on, then baked to insure absolute adherence to the metal. Then several more primers are added before the first coat of color lacquer is put on. Coat after coat of the finest lacquer follow, building a deep, lustrous color finish so much in demand these days. It takes from eight to nine hours to lacquer finish each Chandler body, yet the time is well worth it to the ultimate owner," Mr. Black points out.

"When the bodies have been completely sprayed with their beautiful lacquer colors and have been thoroughly dried, they are moved on a truck conveyor to the upholstery department. Here you will see workers at long rows of sewing machines fashioning upholstery and car carpets. As these trim materials are fashioned to each job, upholstery experts see that this material is properly built into the job for which they are intended. Only the finest material

WORK IN TUNNEL TOLD BY LIGHTS

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tell how each motor and fan in the distant tubes is functioning. Some are keeping watch on the power cables that feed the electrical equipment of the tunnel. Others reveal whether the ventilating system is working properly, whether the water pumps are doing their assigned tasks and whether a faraway switch is opened or closed.

Traffic control also is recorded by lights. Each little red, green or white bulb on the third board in the control room is a counterpart of a "Stop," "Go," or "Single File to the Right" signal in the tube, and the supervisor at his desk can tell at a glance whether the line of automobiles below the river is moving smoothly, or whether a tie-up has occurred, making possible one-man control of whatever situation may arise.

CHRYSLER SERVICE BEING STANDARDIZED

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satisfactory upkeep and of pleasant relations with the dealer's service department—is of increasing importance in every automobile sale.

FEDERAL AID ROADS BUILT IN OREGON

(Continued from page 1)

round campaign toward the end of reducing traffic accidents, will inevitably will be greater safety."

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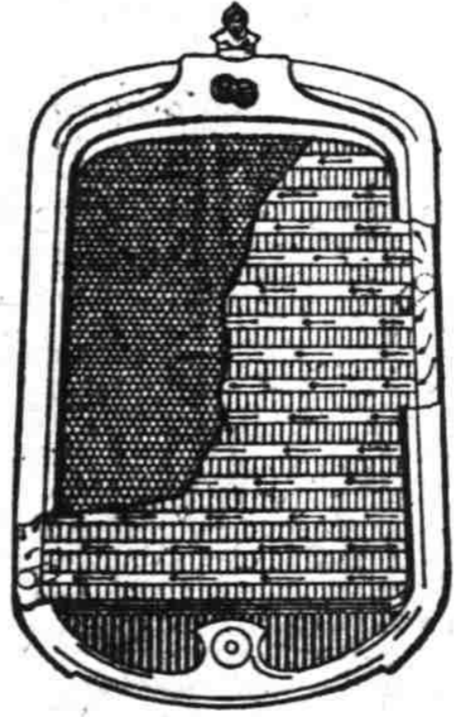
- \$670 1 1/2-Ton Commercial
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The "cross-flow" radiator consists of two side tanks, a top tank and a core made up of horizontal passages. Water from the engine enters the inlet tank at one side, flows horizontally through the core and is pumped from the outlet tank back into the water jacket. It cannot come in contact with the water in the top tank until after it has been cooled, and, as a result, even though the cooling liquid is boiling when it enters the radiator, it is practically impossible to lose any appreciable amount of water or alcohol due to high operating temperatures.

2-DOOR SEDAN \$745

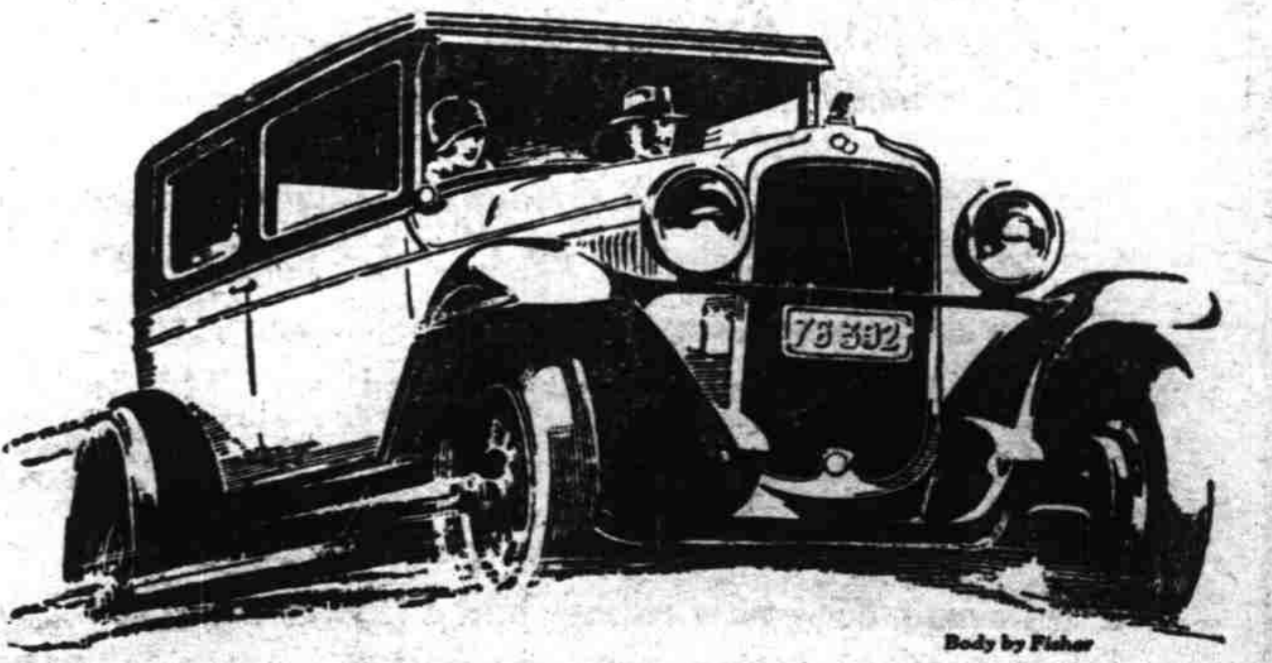
- Coupe \$745
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With the "cross-flow" radiator, losses of water in summer and alcohol in winter are reduced to a minimum with a resultant decrease in radiator attention—correct temperature of cooling water is assured—and a sturdier front-end construction is obtained.

Engineers and owners unite in acclaiming the "cross-flow" radiator one of the greatest automotive developments of recent years. Yet this is only one of scores of engineering advancements included in the New Series Pontiac Six—only one of a dozen reasons why you should inspect and drive this marvelous new General Motors car!



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