

# AUTOMOBILES

## Experiments Show Dust Serious Factor In Engine Wear

All motorists dislike to "eat dirt." So do all motor cars. The only difference is that the motorist can hold his breath until the dust cloud has passed while the motor must keep on breathing whatever variety of air comes to the "nostrils" of its carburetor. A striking series of experiments

conducted by the engineers of the Oakland Motor Car company revealed that the breathing of dust is really one of the most serious factors in engine wear. The experiments were conducted with the most delicate of scientific instruments some of which will measure a minute dust particle .0005 of an inch in diameter. The conclusion reached by these engineers has resulted in the adoption of the air cleaner with which the new Oakland cars are equipped. This cleaner, which operates on the principle of the centrifugal cream separator, whirls every particle of

dust and foreign matter from the air and feeds only the purified air into the carburetor. Oakland and General Motors engineers have overwhelming proof of the necessity for such protection, regarding it as particularly important in the present day of heavy traffic and dust-stirring balloon tires. Among other things it was found that an average automobile breathes 10,000 gallons of air with every gallon of gasoline. Every bit of this air contains dust to a greater or lesser degree. Some dust is so fine that it falls at the rate of less than one inch per

hour. The air over dirt and gravel roads, of course, reveals the highest content of dust. But even over concrete roads the air, particularly when traffic is moving, contains dust in harmful quantities. General Motors engineers have made some interesting tests in the district south of the Mason and Dixon line and west of the Mississippi. A number of cloth filters were sent out and placed on automobiles which were driven from widely separated districts. They revealed that the dust breathed in the automobiles in 500 to 1,000 miles in all localities is substantially the same. It is from 90 to 98 per cent mineral matter, more than half of which is silica or quartz, a destructive abrasive or grinding compound. Its size varies from .0005 of an inch to .0015 of an inch.

The engineers knew that foreign matter mixed with lubricating oil wore the moving parts of the car and combined with the oil to form the hard carbon which causes carbon knock and pre-ignition. But they wanted to know just what degree of wear was caused by the abrasive dried dust. They wanted exact figures. Accordingly they made an indoor laboratory test. Two engines were operated continuously for 36 hours. One was protected by a centrifugal air cleaner. The carburetor of the other carried no air cleaner. Two-thirds of a pound of dust was fed evenly and gradually into the air intakes of both motors. Measurements then revealed that the cylinder wall wear of the unprotected motor was 15 times greater than that found on the motor which had been breathing through the air cleaner.

Tests of this kind reveal why the more progressive motor car manufacturers are turning to the air cleaner as a practical essential under today's driving conditions. "The Chrysler Plan is the result of a long study on the part of Chrysler executives how to reduce the deferred payment delivery price of Chrysler cars. The Chrysler Corporation concluded that a first step would be to take advantage of its mass purchase power and to arrange for the lowest possible finance charges, such charges to be uniform throughout the United States. "Obviously no company is going to finance the sale of a car on a deferred payment basis unless that car is insured against loss from fire or theft. So once again the Chrysler Corporation took advantage of its mass purchase power and arranged for insurance on all Chrysler cars, the same to take effect at the time of delivery to purchaser. "The Chrysler Corporation today provides for minimum finance charges sold on cars sold on the deferred payment basis.

"The Chrysler Corporation is saving the public money because in so doing it is able to sell more cars and the Chrysler Corporation makes its money manufacturing and selling the cars. "The Chrysler Corporation believes it is good business for itself or any other corporation to save the public money. "We believe the Chrysler plan to be a safe plan of genuine merit. Always get your 'Classified Ad' into The Eccentric office before each Wednesday night.

## USED CAR DIRECTORY

1923 Big Six Studebaker Sedan. 1924 Maxwell Club Sedan. 1924 Big Six Studebaker Touring. 1921 4-Pass. Dodge Bros. Coupe. 1924 Dodge Bros. Camping Car. <i>Other Cars in Good Condition and Representing Excellent Values.</i> <b>EVANS - JACKSON</b> 119 S. Woodward Ave. Phone 301 Birmingham Mich.	<b>CERTIFIED BARGAINS</b> 1925 Chrysler 6 Roadster, \$450.00 down. 1925 Willys-Knight Coupe-Sedan \$330.00 down. 1921 Cadillac Victoria, \$330.00 down. <i>Liberal Payment Plan</i> <b>WURSTER &amp; STAPLETON</b> 132 W. Maple Ave. Phone 674 Birmingham Mich.	1925 Oakland Coach. 1925 Oakland Touring. 1924 Oakland Sedan. 1924 Oakland Touring. 1924 Oakland 4-Pass. Coupe. <i>All Cars Fully Guaranteed—Year Car Accepted As Part Payment—G.M.A.C. Terms.</i> <b>BLOOMFIELD AUTOMOBILE CO.</b> 113 Brownell St. - Ph. 550 (Near East Maple Avenue) Birmingham Mich.
1920 Happ Touring. 1922 Mercer Coupe. 1922 Jewett Coupe. 1922 Nash Touring. 1921 Dorr Touring. 1923 Gray Touring. <b>ALL USED CARS IN A-1 CONDITION</b> <b>BELL BROS. GARAGE</b> 122 East Maple Ave. Phone 709 Birmingham Mich.	1924 Gray Sedan. 1925 Ford Coupe. 1923 Ford Sedan. 1920 Ford Touring. 1924 Chevrolet 4-pass. Coupe. 1923 Chevrolet Roadster. <b>BERGER SALES</b> 505 North Woodward Ave. Birmingham Mich.	4 door Ford Sedan (year 1923). Ford Coupe (year 1921). Overland 91 Touring (year 1923). Hudson 7-passenger Sedan (year 1923). Reo 4 passenger Coupe (year 1923). 1923 Olds Touring. <b>EVERY CAR A REAL BUY</b> <b>BOUGHNER BROS.</b> 132 S. Woodward Ave. Phone 70 Birmingham Mich.

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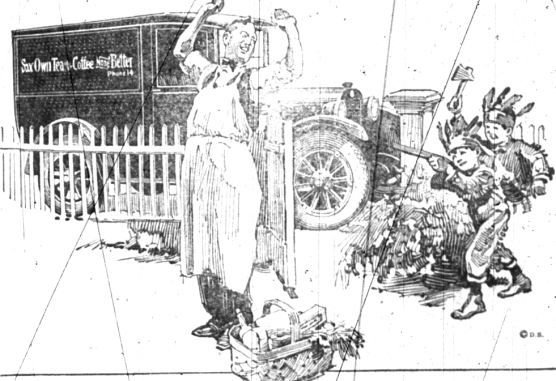
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