

Smaller Piston Displacement is Showns in Autos

Conspicuous among the changes which have been made in motor car construction during the past year is the decrease in average piston displacement.

The trend in this direction started early last year and was freely discussed at the time Willys-Overland appeared on the market with the Whippet which was a car with notably small piston displacement yet with the greatest developed horse power in the light car field.

The average piston displacement of all American built cars this year is three cubic inches smaller than last year.

This is not a marked reduction and yet it establishes the direction in which motor car engineers seem to be moving.

An interesting phase of this reduction in cylinder dimensions is the fact that motor power as indicated by the developed power at the point of maximum efficiency has not decreased but has shown an upward tendency.

Motor car authorities are of the opinion that this establishes the American motor car engineer on the basis of going out after a fuel economy and a general motor efficiency which will result in more generally satisfactory operating costs.

Leading factors in developing increased power from decreased dimensions are the trend toward higher compressions and greater speed of piston travel. With modern force feed lubrication, modern bearing construction, and the modern method of suspending the crankshaft in the motor with extra large bearing surfaces, the increase in piston travel becomes a feature of marked advantage so far as operating economy and efficiency are concerned.

A notable feature of the Whippet is the fact that it is the one American built light car in which the

Chryslers Score Again in Contest

Capture First, Second, Third and Sixth Places in Test of Economy

Cabled advice just received by the Chrysler corporation at Detroit brings word of still another remarkable feat performed in Australia by this company's cars. In a general petrol test held at Sydney, Australia, Chrysler cars captured first, second, third and sixth places. Challenged by the Royal Automobile club as to possibility of any car making the remarkable mileage per gallon accomplished by the winning Chrysler "60," the same car went over the course again and exceeded its original record.

This gasoline economy performance is the latest in a series of signal Chrysler triumphs in Australia. Within recent months these cars have won liberal praise all over the Australian continent by hanging up a new record for the famous Maroubra speedway in Sydney, where a stock "70" made the phenomenal speed of 1000 miles in 955 minutes and covered 1168 miles in 24 hours driving, and also by taking first place in the official ten day reliability contest at Coolangubra, which is regarded as Australia's biggest motoring event.

The combination of speed, economy and endurance credited to Chrysler has resulted in these cars becoming very popular with the sport loving people of Australia, according to officials of the Chrysler corporation, who cite it as one of the reasons for the heavy gains their export business has been showing the last year.

compression ratio and rate of piston travel per cylinder are equivalent to those of the modern six-cylinder motors.

Inner tubes will give better service and last longer if a new tire flap is installed.

R. W. Bush Chosen As Assistant for Chief Sales Head



In accordance with factory policy of promoting members of its nationwide organization whenever the opportunity is presented R. W. Bush has been chosen as assistant by W. J. Richmond, sales manager of the Chevrolet Motor company for the Pacific northwest zone. Though the announcement has been withheld until this time, Mr. Bush's appointment to his present important position became effective on April 15, at which time A. Parker, formerly the assistant to Mr. Richmond, assumed the position of sales manager of the new Chevrolet sales zone of which Butte, Montana, is the headquarters.

The new lieutenant of the northwest zone executive has been in the service of the company about five years, first as regular division representative in Portland and afterward as manager of dealer development work. Approximately a year ago he was advanced to the position of special representative. This gave him the entire zone as a field of operation and the familiarity with factory and dealer affairs which logically placed him in line for further elevation when the time arrived.

"Mr. Bush is capable, loyal and devoted to duty," said Mr. Richmond, "and by reason of his experience was in direct line for promotion. I have every confidence in his ability to perform as well in his present position as he did in those of lesser importance. Every dealer in the northwest field will have an ally in Mr. Bush, a good part of whose time will be spent in personal contact in the territory."

Farm Autos Gain in Pennsylvania

The number of farms in Pennsylvania having automobiles is estimated at 170,462, or 85 per cent of all farms.

Motor trucks are reported on 33,345 farms.

Proper Inflation is Point to Remember

"The mileage, life and service depend on several factors," according to Cap Calkins, local Firestone dealer.

"These factors include the tire, driver, car, roads, and last but not least, on using tires large enough for the heaviest load placed on them at any time and keeping them inflated to the correct pressure."

"Nearly every day some one will say to us: 'Why do some people get 25,000 miles from their tires when the best I ever get is around 10,000 miles? How do you account for that?'"

"The trouble is not with the tires, but with the way they are overloaded or underinflated. Nothing—man, beast or mechanical device—can stand up under great abuse. The remedy is to provide tires large enough for the maximum load that may be placed on them and to keep them properly inflated."

"Reasonable care and regular inspection of tires for minor injuries and checking of the air pressure will enable the motorist to get the most in mileage and useful service."

Headlight Tests are Resumed by Bureau

WASHINGTON, April 30.—Prevaling disregard of automobile headlight regulations in the United States this week caused the United States bureau of standards to renew its test and experiments with headlight illumination.

Two cars with four headlight lamps each are being used for the experiments at the bureau and 15 of the four-lamp equipments have been distributed by the Society of Automobile Engineers and the So-

ciety of Illuminating Engineers to automobile and headlight manufacturers for co-operative experiments.

After the tests a conference will be held this spring to permit an exchange of views and conclusions. The object sought is the combination of a safe, comfortable driving light from the standpoint of the driver with a minimum of inconvenience to the approaching driver.

The tests so far show that accidents at night are more common from inadequate lights than from the so-called glare.

Cleveland to Hold Fall Auto Exhibit

Products of the automotive industry, which represents an investment of \$250,000,000 in Cleveland alone, will be featured at the industrial expositions to be staged in that city during August. The affair, which will be the largest industrial exposition ever held in the country with the exception of world's fairs, is being managed by the Cleveland chamber of commerce.

HELP PRESERVE OUR FORESTS

(Continued from Page One)

with years of experience in forest work really knows. It takes but little longer to extinguish the camp fire in the proper manner and it helps to preserve the mountain timber in its natural, wild state.

Oil or grease on the soles of shoes may cause the foot to slip off the brake pedal. Wipe the shoes before getting into the car.

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WE'll give you credit for every bit of mileage left in your old tires on the purchase of brand new G & J Tires. You won't lose a thing by turning in those old shoes that have been worrying you.

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The G & J Balloon
A true balloon tire, built to render long and comfortable service. Its wide, flat tread gives longer wear, and better traction and anti-skid protection.

Drive away with a new set of dependable G & J Tires. They're economical and long-wearing—tough and durable. They'll banish your tire worries. Each tire bears the G & J trade mark and standard warranty.

There's a tire here for your car. Drop in on G & J Headquarters and hear our proposition.



G & J Tread Cord
Ford owners will find G & J Tread Cord tires ideal. They offer real economy in tire service. (Made in 30's and 32's sizes.)

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.. Smart as the Ritz ..

Young Americans under sixty insist upon the mode. Peg-top trousers and long skirts belong to other years. Style is progress. The mode in motor cars is no exception.

Today's motor car has four-wheel brakes. Speed dictates them. It's safer to be up-to-date—and smarter. The Whippet Collegiate is the season's best seller in Roadsters for these reasons:

Four-wheel brakes. If you were paying \$2,000 you'd insist upon them.

Seats for four passengers. Take 'em or leave 'em.

Speed—Too fast. We admit 55 miles per hour.

Acceleration—Invariably first on the green light.

Economy—Whippet holds the Coast-to-Coast record for economy.

Plus these features: Oversize tires; Snubbers; Adjustable steering wheel; More leg room; Force-feed lubrication; Silent timing chain; Dickie seat for two extra passengers.

New Low Prices

	Whippet	Whippet Six
Couche	\$625	\$795
Touring	625	765
Roadster	695	825
Coupe	625	795
Sedan	725	875
Landau	755	925

Prices and specifications subject to change without notice. Prices f.o.b. factory. Willys-Overland, Inc., Toledo, Ohio.

OVERLAND Whippet

OVERLAND-KNIGHT SALES CO.

4th and Klamath Ave.

Phone 899