

Big Gain in Autos Owned in State in 12-Year Period

25,617 Cars in Nebraska in 1913 Compared to 312,324 Registered Here in 1924.

By ROY M. COCHRAN, Secretary, Department of Public Works. The automobile registration records show that in 1913 there were registered in Nebraska approximately 25,617 automobiles and trucks. In 1924, there were registered 312,324. The increase from year to year is shown as follows:

Year	Number Registered
1913	25,617
1914	28,923
1915	32,409
1916	36,854
1917	41,101
1918	45,409
1919	50,000
1920	54,776
1921	59,599
1922	64,474
1923	69,349
1924	312,324

It seems to the writer that a study of this table alone should convince anybody of the necessity for road construction and at a greater rate of progress than has been made financially possible during the last few years. The above table shows that since the year 1919, the number of motor vehicles in Nebraska has almost doubled, while on the other hand, the state appropriation for construction during the biennium of 1923-1924 was only one-half as great as was the appropriation for construction during the biennium 1919-1920. In other words, as the traffic has increased, the funds made available for construction have been decreased, and in large percentages.

This situation has been relieved somewhat by an increase in automobile registration funds which funds are used for maintenance. The facts are, however, that Nebraska's construction program has not kept pace with the traffic increase. Traffic census taken at the same stations during the same month in 1923 and again in 1924, show an increase of traffic varying from 12 per cent to 18 per cent, or an average increase in two years of 47 per cent. This same census taken in August, 1924, showed that an average of all traffic taken at 35 stations in Nebraska was 16 per cent interstate, or cars from states other than Nebraska, 31 per cent intercounty or cars from counties of Nebraska other than the county in which the census was taken, leaving slightly over half of 83 per cent, as strictly local traffic. This latter gives a good idea of the general use of the state highway system as a whole by the people of the whole state and of other states. With traffic amounting to from 300 to 3,000 vehicles per day on the state highway system, it becomes quite apparent that there is a real economic necessity for putting this highway system into such condition that 365 days use can be made of same.

Necessity for Surfacing. This brings up the necessity for the surfacing of the state highway system so that passenger cars and trucks can make use of the highways during the whole year. Except in the vicinity of population centers, where hard surfaced pavement is necessary, it is thought that a gravel surfaced highway properly constructed and properly maintained is adequate for the usual traffic needs and is financially possible without the voting of bonds or even a direct levy.

Taking the \$3,000,000 federal aid now available for Nebraska and adding \$1,500,000 federal aid made available to Nebraska as soon as the recently passed appropriation made by congress has been signed by the president, will make a total of \$4,500,000 immediately available for construction as soon as met by a like amount of state funds.

All of the revenue from a 2-cent tax on gasoline would meet this \$4,500,000, and while an additional \$1,500,000 will become available to Nebraska next year under the terms of the bill just passed by congress, it is thought that the legislature will not meet this until the next meeting of the legislature.

With this legislature meeting this \$4,500,000, it will make possible the graveling of over 1,000 miles of highway in addition to the grading of several hundred miles and the construction of adequate bridges and culverts, all of this being possible without any direct levy for state highway purposes.

In addition to the construction program in keeping with traffic increase, intensive and continued maintenance must be had, failure to provide such maintenance, not only causing the loss of the original construction investment, but also preventing the complete utilization of the improvement by the traveling public.

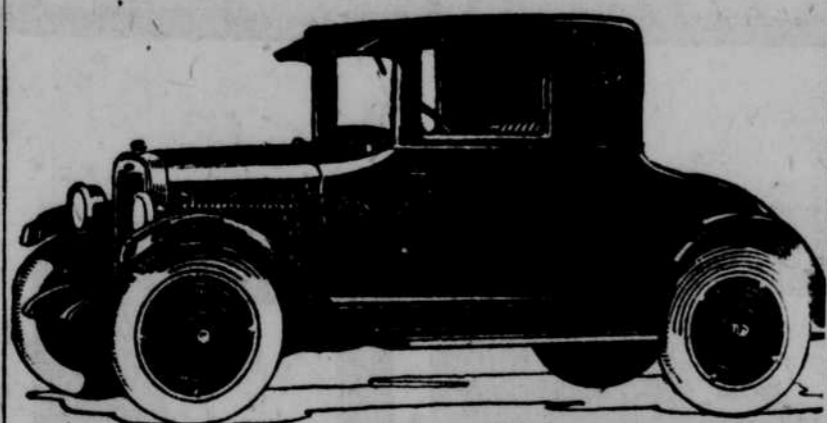
Needed for Gravel. This maintenance is equally if not more essential after a road has been surfaced with gravel. To this end, a material prospecting crew properly equipped will be kept busy by the department of public works, so that not only a maximum use can be made of local gravel deposits for construction to avoid freight costs, but also that a supply of maintenance gravel will be available for future use.

As a result of the increased use made of our highways, traffic control has become an important problem. The elimination of steep grades, sharp turns and particularly of railroad grade crossings and the installation of a standard uniform system of warning signs has become very essential.

Such a system is to be adopted by Nebraska so that the same types and shape of warning signs will be used in all parts of the state. This standard which is patterned closely after that of Minnesota has been recommended for universal adoption by all states by the American Association of State Highway Officials so that within a few years there should be a uniform marking system the country over.

Easy Routes for Motorists. Improved highways make every part of Pennsylvania easily accessible. Modern thoroughfares connect the centers of production with the centers of consumption. It is possible to drive 2,000 miles in a straightaway without once leaving improved road.

Chevrolet Exhibits Coupe



Prosperity of Motor Trade Told by Statistics for 1924

"Facts and Figures of the Automobile Industry for 1924," presented below, were compiled by Alfred Reeves, general manager of the National Automobile Chamber of Commerce.

PRODUCTION.	
Cars and trucks	3,650,000
Cars	3,200,000
Trucks	450,000
Percentage decrease from 1923	10%
Percentage increase over 1922	38%
Production of closed cars	1,300,000
Per cent closed cars	39%
Total wholesale value of cars	\$1,994,540,000
Total wholesale value of trucks	284,556,000
Total wholesale value of cars and trucks	\$2,279,096,000
Tire production	45,000,000
Wholesale value of motor vehicle tire business	\$627,697,000
Total wholesale value of parts and accessories, exclusive of tires	\$872,838,000
Average retail price of car, 1924	\$814
Average retail price of truck, 1924	\$1,928
Number of persons employed in motor vehicle and allied lines	3,160,000
Special federal excise taxes paid to United States government by automobile industry in 1924	\$144,000,000
REGISTRATION	
Motor vehicles registered in U. S. (approximately)	17,000,000
Motor cars	15,200,000
Motor trucks	1,800,000
World registration of motor vehicles	19,500,000
Per cent of world registration owned by U. S. A.	87%
Motor vehicle registration on farms	4,600,000
Motor cars	4,175,000
Motor trucks	425,000
Miles of improved highway	455,000
Total miles of highways in United States	2,941,294
AUTOMOBILE'S RELATION TO OTHER BUSINESS.	
Number of carloads of automobiles and parts shipped over railroads	736,000
Rubber, per cent of, used by automobile industry	70%
Plate glass, per cent of, used by automobile industry	53%
Copper, per cent of, used by automobile industry	14%
Aluminum, per cent of, used by automobile industry	62%
Iron and steel, per cent of, used by automobile industry	10%
Upholstery leather, per cent of, used by automobile industry	65%
Gasoline consumed by motor vehicles, 1924 (gallons)	6,029,000,000
Crude rubber used in manufacturing tires (pounds)	605,000,000
Cotton fabric used in manufacturing tires (pounds)	191,000,000
MOTOR BUS AND MOTOR TRUCK.	
Number of motor buses produced	10,000
Number of consolidated schools using motor transportation	13,827
Number of street railways using motor buses	168
Number of buses used by street railways	2,500
Number of railroads using motor vehicles on short lines	174
Number of railroads using motor trucks as part of shipping service	33
EXPORTS	
Number of motor vehicles exported	380,000
Value of motor vehicles and parts exported (including engines and tires)	\$265,000,000
Per cent increase in motor vehicles exports over 1923	15%
Per cent of motor vehicles exported	10%
Number of motor vehicles imported	745
MOTOR VEHICLE RETAIL BUSINESS IN UNITED STATES.	
Total car and truck dealers	50,512
Public garages	59,989
Service stations and repair shops	67,828
Supply stores	64,533

Dealers Visit Hudson Plant

Nebraskans Make Tour of Big Automobile Factory in Detroit.

R. H. Davison, manager of the Omaha Hudson-Essex company, returned this week with a bunch of 10 dealers from the Hudson Motor Car company factory in Detroit. He and these dealers who witnessed the production of Hudson and Essex automobiles realized for the first time the reason such good automobiles could be built at such low prices.

In going through the plant and seeing each unit, in fact each piece of material in the raw state and feeling that same piece of material a finished product before the end of a day, is a revelation to most anyone, particularly in the high-priced car class, but this is the story the Hudson Motor Car company demonstrated to the Nebraska boys.

The speed with which a car can be produced and still have every known precaution test for exactness that is given in this plant makes it possible to produce the highest class of workmanship and material to turn out a Hudson or an Essex automobile each 40 seconds of an eight-hour working day in this plant. The automatic machines used in the production of these cars in making the parts, eliminate the heavy labor of a man lifting or handling the heavy parts being used, as there is an electric crane to do all this heavy work, even to the wheels, which come down to the assembling line on electric conveyors just at the right place to be set on the axle.

One very interesting part was the export department where a crew of 30 men are kept busy crating cars for shipment to almost every foreign country, and the compactness with which an automobile chassis can be crated and shipped does not seem possible until one has actually seen it done.

The Nebraska boys visited several other motor car plants while in Detroit and found that the efficient Hudson plant was producing 800 cars per day with 7,000 men as against some other plants producing 300 cars per day with 17,000 men, which, of course, they all know, makes it possible to save a lot of money per car in the Hudson factory. Each dealer that made this trip has promised that any time in the future the Omaha Hudson-Essex company want a bunch to go to the factory, they will bring at least one other man with them to make the trip.

Fineness in Gauging Cars

Packard Company Adopts Measuring by Light Waves an Innovation.

Measuring by light waves, the last word known to science in precision of measurement, now is being done in the every day work of building automobiles. The system has been adopted by the Packard Motor Car company, the first automobile company to use it.

Actual measurements as fine as one-millionth of an inch are made easily with the light wave equipment in daily use at the Packard factory. Such fineness in gauging is believed to mark a still further step in advancing American precision methods of quality manufacturing.

For some time in the automobile industry precision blocks guaranteed to be within one-millionth of an inch of perfection have been in use as standards of measurements against which precision tools could be checked. Light wave measuring is a further safeguard of quality in manufacture.

Measuring with light waves is done by counting delicate waves of light or shadows under highly polished glass discs when violet rays are projected through the discs on to the piece to be checked. The system is that used by the bureau of standards at Washington and in the laboratories of a number of well-known American and European scientists. It is being given much study in the laboratories of some of the better known scientific universities.

Prof. Robert H. Smith of the Massachusetts Institute of Technology, while at the Packard factory investigating precision methods of manufacturing motor cars, suggested the practical use of light wave measuring as a part of the daily routine inspection work of the factory inspection bureau.

for Economical Transportation



New Closed Models

Opening Display

The new Chevrolet closed models are truly beautiful cars. New Fisher Bodies of handsome design, finished in richly harmonious colors of Duco—built on the new Chevrolet chassis with the new, improved dry-plate disc clutch, semi-elliptic springs and extra strong rear axle with banjo-type pressed-steel housing construction such as you would expect to find only on high priced cars.

They have the new non-rusting airplane metal radiator, cowl lights and VV type, one-piece windshield with automatic windshield cleaner.

- The Coupe
- The Coach
- The Sedan

is finished with lower panels and hood in sage green Duco, upper panels and fenders in black. It has balloon tires and disc wheels. Price \$715 f. o. b. Flint, Michigan.

has extra wide doors and windows. It is finished in a handsome shade of rich dark blue Duco. It has, as standard equipment, special artillery wheels and balloon tires. Price \$735 f. o. b. Flint, Michigan.

has a beautiful aqua-marine blue finish on the lower panels and hood and a deep black on the fenders and upper panels. It is equipped with balloon tires and disc wheels. Price \$825 f. o. b. Flint, Michigan.

these beautiful new cars at your nearest Chevrolet dealer's

Quality at Low Cost

Stand for Oil Can. The car owner who purchases his oil by the large can or drum finds it tiresome to hold the large can while filling the smaller one which he carries in the car, especially in cold weather, when the oil flows slowly. By making a pair of rockers, the weight of the can is supported on the floor while the oil is being poured.—American Automobile Digest.

Avoid Brake Squeaks. Squeaking brakes are an offense to the public ear and can be prevented by hand adjustments that will equalize the pressure all around the drums, by an occasional cleaning of the surfaces of the lining and by avoiding protruding rivets.