

NEW BUDA TYPE OF MOTORS FOR TRACTOR WORK

Machine Just Designed Combines Features That Permitted Operation With Low Grade Gasoline.

The manufacturers of Buda motors have designed a new type of motor for tractor use, and according to Frank DeBrown of the Nebraska Parrett Tractor company, this motor is now being used in Parrett tractors.

The cylinders have a removable head, held in position by 21 studs insuring a good joint between head and cylinder casting. This makes it easy to remove cylinder head for inspection, removing carbon, inspecting or grinding valves. This type of head also permits placing the spark plugs near the center of combustion chamber and to secure a good circulation of water around the spark plugs.

Easy to Remove Pistons. Other improvements which make the motor especially adapted for tractor service are the two-piece pistons; providing easy access to the bearings; the settling chamber in oil pan which collects all dirt, abrasion, or other heavy particles which may accumulate in the oiling system and which can be removed through the drain plug located at the lowest point of the chamber.

Valves Free From Dirt. The motor is of the three-point suspension type and supports are rigid and strong. The supporting arms are so arranged that lower half of crank case can be removed for the purpose of inspection or adjustment of parts without disturbing the adjustment of crank shaft bearings or supporting arms. Inlet and exhaust valves are of liberal size having an effective working diameter of one and seven-eighths inches and are entirely enclosed and operated from one cam shaft.

One-Piece Shaft and Cam. Pistons, piston pins and connecting rods are carefully machined to a given weight. Special attention is given to securing a perfect balance of all moving parts, and to securing a perfect fit between parts. Pistons are of cast iron, piston pins of open heart steel and connecting rods of open heart steel, I-beam section. The cam shaft and cams are forged in one piece from open heart steel and have all working and bearing surfaces, which are of liberal dimensions, accurately ground. Cams are exceptionally wide and designed for quietness. The crank shaft is drop forged from open heart steel, heat treated machined, carefully balanced and drilled for force feed oiling system. The method of manufacture raises the tensile strength of the crank shaft to 120,000 pounds per square inch and the elastic limit to 85,000 pounds per square inch.

Cooling Arrangement. Timing gears have an extra wide face, 1 1/2 inches, and are cut helical and specially machined to insure practically noiseless gears at all times and

He Does Not Jump Into a Tank



"Dare Devil Wilson" as Seen in His Leap for Life. One of the Big Free Attractions at New Krug Park This Week.

all speeds. The three main shaft bearings and connecting rod bearings are bronze shell, babbit lined. The three cam shaft bearings are of babbit, die cast. All bearings are reamed and scraped to a perfect bearing. Cooling is by means of forced water circulation using a centrifugal water pump, water pipes are extremely short, simple in construction and designated to connect to radiator without bending the hose. The oiling system is a full force pressure feed to all bearings through the drilled crank shaft. The oil is pumped from the oil reservoir below the crank case and forced through a pipe to the main bearings and from these through passages in the crank shaft to connecting rod bearings. Cam shaft bearings, piston pins and timing gears are lubricated through passages connected with the pressure system. Pistons and cylinders are lubricated by oil thrown from the lower ends of connecting rods.

Stowell Back to Omaha With Af-Ford-Able Truck

B. T. Stowell, formerly associated with the Omaha automobile row, has returned to Omaha and has accepted the position of district representative of the Af-Ford-Able Truck company. Stowell left last week for Minneapolis, where he will pass a month with the Northern Distributing company, Minneapolis distributors of Af-Ford-Able trucks.

Powerine Puts Kick In Low Grade Gasoline

A product called powerine is now being marketed in Omaha by C. F. Patten which the makers claim puts a sure enough kick in low-grade gas. Numerous garages are experimenting with it and so far the experiments are very creditable.

STANDARD SIZES CREATE ECONOMY

Tire Stocks Much More Easily Handled Under Ruling of the War Service Board.

"In standardizing tire sizes, war has performed a service in one year's time for dealers, manufacturers and car owners that it would have taken a score of years to accomplish in normal times," said Henry Nygaard of the Omaha Tire Repair Co., distributor of Diamond tires.

"There is really no necessity for the multiplicity of sizes and types of tires which manufacturers have been making and dealers have been carrying in stock. And yet, I doubt whether we would have weeded out the nonessentials short of 1950 had the old world continued to drift along in 1912 fashion.

"When an automobile designer specified a tire of different size or type, tire manufacturers simply made it. No one stopped to inquire whether some existing size or type wouldn't suit just as well. As a result, we have had a total of 287 different tires, with consequent high manufacturing costs and large investments by dealers who endeavored to carry a complete stock.

Only Six Sizes. "By the recent action of the pneumatic tire division of the war service board," continued Nygaard, "rims on new cars will be limited to six sizes and it will be simple for tire makers to follow suit by reducing to nine standard tire sizes. The new dimensions are as follows: Rims—24x4, clincher; 22x3 1/2 straight side; 22x4 straight side; 24x4 straight side; 26x4 straight side, and 28x7 straight side. Tires—20x3 1/2 clincher; 22x4 clincher; 22x3 1/2 straight side; 22x4 straight side; 24x4 straight side; 26x4 straight side; 28x7 straight side, and 28x8 straight side.

Will Reduce Stocks. "Some sizes are abandoned immediately. Others are continued for varying periods, but by November 1, 1920, the entire plan will be in effect.

"It's the best thing that ever happened," said Nygaard. "Tire dealers will carry smaller stocks, have lower overhead expense, and the manufacturers will welcome the new condition. This is directly in line with the purposes of the war service board. The new program will be adopted gradually, giving car owners plenty

of opportunity to change their rim equipment where the car will outlive the supply of odd size tires. All new automobiles will conform to the new standards, gradually eliminating all demand for odd sizes."

Volunteer Farmers Are Taken to the Fields in Automobiles

"No better illustration of the practical utility of the motor car and the big part it is playing in solving the domestic problems created by the war can be found than the service the automobile is giving in certain western sections to help move the crops," says Henry Krohn, sales manager of the Paige-Detroit Motor Car company.

"As every one knows it has been very difficult for the farmers in various states to get sufficient labor to harvest the crops, which, generally speaking, are exceptionally large this year. In many cases it was feared there would be big losses, because of the scarcity of men, until some one in a western city conceived a bright idea. Promptly at 4 o'clock all retail stores and business offices were closed and the clerks, proprietors and business men, boarding motor cars, loaned and commandeered, were rushed to the surrounding agricultural area. There they scattered among the farms and worked in the fields until 8 o'clock. This was continued each day and great progress made in harvesting the grain. The idea has been adopted in many sections of the west and is being followed out with great success.

"Without the motor car this would be impossible. The volunteer laborers would not be able to get to the farmer. Were horse-drawn wagons depended upon, too much time would be consumed in transportation back and forth to make the scheme practical. Incidentally, the idea works out greatly to the benefit of the city clerks who will be much better off physically for their summer's work in the fields."

Clutch Trouble

When the shifting collar of the clutch has suffered considerable wear, or the small pins in the rod which connects the clutch pedal with the release mechanism have worn, the clutch pedal may be pushed down all the way and yet the spring which is intended to keep the parts in contact

will not be compressed sufficiently to function properly.

Use for a Clutch. The much-abused clutch has one positive virtue if no other; it may be used for determining the condition of the fuel mixture. By running the en-

gine after dark and throwing on the cutout the flame that issues therefrom will tell exactly the condition of the flame. If the flame is blue or colorless, the mixture is correct, whereas a red flame indicates an excess of gasoline and a yellow flame the presence of too much air.



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New Victor Garage on North Side



This fine new garage has recently been opened to the public. It is located at 2307-17 North Eighteenth street, and has a capacity of 130 cars. This new garage will be opened day and night.

Physicians Find Auto Necessary in Profession

"The automobile has revolutionized the practice of medicine," writes a prominent physician to the Knudsen Auto company, Moline Knight distributors.

"Of all the professions and various occupations which demand the use of the automobile, the medical profession ranks among the first.

"For instance, in the last ten years I have averaged 15,000 miles a year and during that entire time, at least 90 per cent of the mileage has been for professional duties."

Sudden Stoppage

To the new owner of a motor car there is nothing else quite so mystifying as to have his engine suddenly and instantaneously stop running, after it has been going along apparently in the best of health. This means a sudden dead stop with no preliminary coughs and wheezes. The veteran driver knows, however, that this probably means a failure of the ignition system and furthermore realizes that a wire has probably broken, as it is almost impossible for any other trouble to cause this instantaneous stoppage.

A prominent physician of Youngstown, O., was the first member of his profession to make use of an automobile in his practice. This was in 1896.

Backed by a Real Guarantee

The Columbia (no adjustment payment) guarantee covers all the materials in the battery. It covers the workmanship that put them there. It guarantees an electrical capacity adequate to the requirements of your car; with an efficiency at least 80% of the original capacity for the period of the guarantee.

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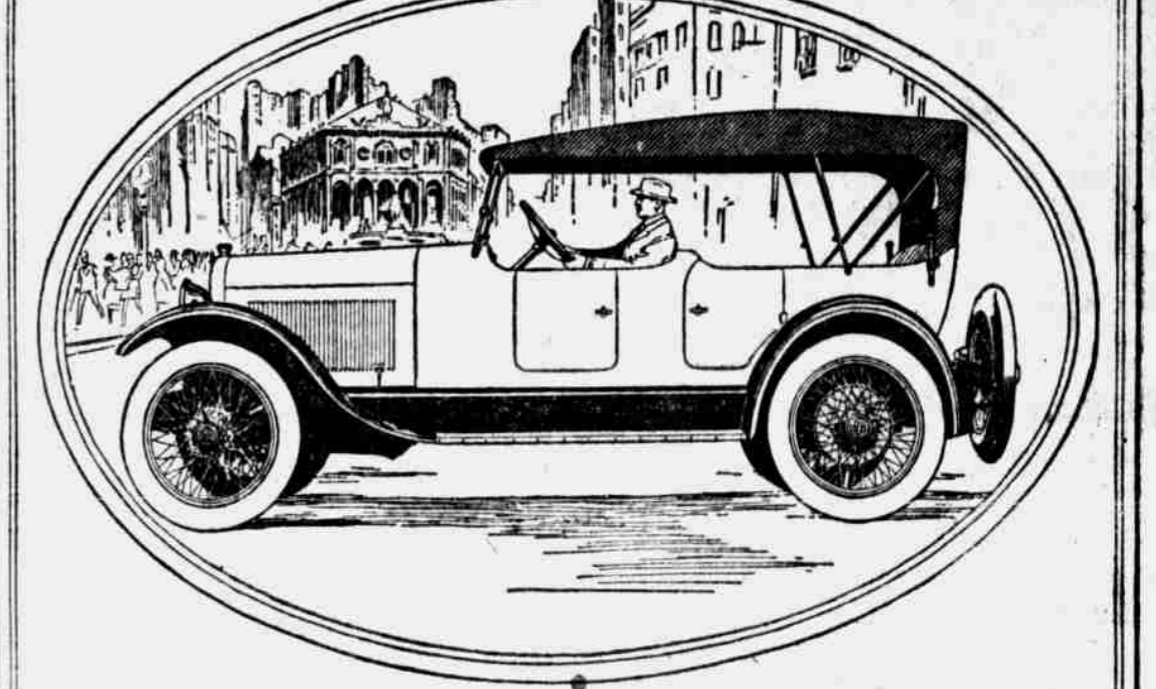
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