

Gasoline Leakage Makes Motor Wear Expensive

"I am not at all anxious that motorists should consider me a crank or a calamity howler," says Max Hagelstine, service manager of the Studebaker corporation, who has attracted considerable attention throughout the country by his frequent reports to automobile owners, "but I certainly do want folks to know more about their cars and the proper care of them."

"Take the matter of lubrication, for instance," firmly believe motorists cannot know too much about lubrication and lubricating oils. Lack of knowledge means loss of pleasure, loss of time and, oftentimes, considerable loss of money. And there is one underlying phase of the subject which is often overlooked by motorists and yet which is the basis of many lubricating troubles. I refer to what is commonly known as 'gasoline leakage.'

"Gasoline leakage is generally caused by a certain amount of seepage which is not burned and finds its way into the crank case diluting the oil and destroying its lubricating qualities from 10 per cent. to 30 per cent. in from two weeks to a month's time, depending upon weather conditions. This means that on the compression stroke some of the gaseous mixture from the combustion chamber leaks past the piston rings and condenses in the cool crank case. This action is due to the fact that the oil does not perfectly seal the space between the cylinder walls and the piston rings. cylinder walls and this leakage has been so marked that oil taken from a crank case, due to the large amount of gasoline present, exploded when touched with a match.

"Of course it is perfectly obvious that gasoline is not a good lubricant. And it does not take much speculation to determine what will happen to a motor if no steps are taken to prevent the gasoline from leaking into the crank case and becoming a part of the lubricant.

"Oil diluted with gasoline, becomes a mighty poor lubricant and will leave the cylinders dry if allowed to continue unchecked. This will cause wear and necessitate the replacing of some vital part of the internal mechanism of the motor. Wrist pins, cylinders and pistons are very apt to suffer from this gasoline leakage—with great danger of bent out connecting rods and main bearings.

"Motorists can avoid this trouble and gain assurance of a perfect seal between piston and cylinder walls by the use of a good motor oil, of course, and the frequent draining of the oil in the crank case.

"If owners will drain off the old oil in a crank case often—say once every two weeks in cold weather, and once a month during the summer—and replenish with fresh oil, there need be no fear of the oil deteriorating and losing its original lubricating qualities. Five dollars spent this way may save a bill of from fifty to one hundred dollars in a season for necessary repairs. The frequent changing of oil in the crank case during a period of seven months would not amount to the price of one piston—and it only takes about ten minutes' time to make the change."

COMPARISONS ARE APT TO MISLEAD

Miles Per Gallon Does Not Necessarily Prove Serviceability of Car

During a discussion among several show visitors last night concerning the advertising claims of many motor car manufacturers, W. R. Strickland, chief of the Peerless Motor Car Company's engineering department, came out flat-footed with a statement which, on the face of it, appears to conflict with the ideas of about 90 per cent. of the automobile builders. "In the absence of definite standards, comparative figures on the performance of a car are misleading and generally worthless," he declared.

"Broadly speaking, the statement that a big car will make better than twelve and fifteen miles an hour on a gallon of gasoline means nothing," he continued. "Or to say that it will make seventy-two miles an hour, means very little to the consumer. The real information sought by the intelligent buyer is: What will the car accomplish under all conditions; how will it take the bad roads; is it easily handled in dense traffic; will it climb hills; does it waste fuel and so on and so on."

"Anyone who knows anything at all about building automobiles knows that it is no extraordinary feat to put together a car which under certain conditions will make ninety miles an hour, but the suitability of the car for ordinary purposes is another question. In fact, it might be absolutely worthless for touring or normal city driving and still it would make ninety miles an hour. It is no real trick to get a big gasoline mileage under certain conditions. For instance, if the driving surroundings are just right a car might roll off twenty miles to the gallon of gasoline on one occasion and that same car would have less than a twelve-mile average for down town work or for average country roads."

"My advice to the buying public is this: See what the car will do under all kinds of conditions, before you buy. Make the demonstrator take you over rough roads, climb hills, drive through crowded traffic, speed it up on a level highway and then compare its performance under those conditions with that of competitive cars. Finally, buy the one which shows up the best. That is the way to tell the efficiency of a car."

"Because of its powerful 80-horsepower motor, the Peerless car can furnish all the speed, and even more, that anyone could wish. It was only a few weeks ago that it won the dealers' event at the Uniontown, Pa., races with an average speed of 80 miles an hour and at times negotiating as high as 95 miles an hour. Even then the driver had not exhausted the full possibilities of the motor. But, nevertheless, the Peerless has something to talk about besides speed. It points to the fact, and proves it, that it is an admirable car for all around service. It has power, speed, comfort, beauty and a type of design which is used only by the makers of the most costly cars.

"When any reference is made to Peerless gasoline mileage, you can depend upon it that the figures used were not taken on a test trip, especially to obtain the maximum mileage under the most favorable conditions. The figures are taken from across country trips, generally, and they include every kind of driving obstacle which the ordinary motorist would be liable to encounter. With this in view, it means something when the Peerless Company says that 15 and more miles per gallon of gasoline have been obtained by its product."

"The public is beginning to realize this and, of course, it is the reason why the demand for Peerless Eights is greater than the supply."

BIBLE CLASS SOCIAL
New Cumberland, Pa., March 31.—On Thursday evening an enjoyable social was given by the Men's Bible class of Trinity United Brethren Church under direction of a committee with Charles Bigler as chairman. G. W. Heffeman, president of the class, delivered a short address and welcomed the guests. The Rev. J. R. Hutchinson, offered prayer and the Sunday school orchestra twelve pieces furnished music. Features on the program were: Music by quartet, consisting of Miss Esther Snell, Miss Ruth Williams, J. W. Wright and Daniel Sites; baritone solo, William Boyer; solo, Frank Entry. The Young Men's Glee Club also sang and Jesse Stone and Ira Ryder gave an instrumental duet. A feature of the entertainment was cartoon work and slight-of-hand tricks by Prof. Haley. Miss Elizabeth Smaling was the pianist. Ice cream, cake and sandwiches were served.

ALUP
Nothing marks an auto as of the ancient vintage so distinctly as the tarnished and battered brass work.

Why Not Give Your Car the 1917 Look?
by having us replate and repair your lamps, radiator, windshield, etc. All work guaranteed. Our prices are the kind that suit the economically inclined.

Both Phones Harrisburg, Pa.
NUSS MFG. CO.
11th & Mulberry Sts.

Franklin
--the efficiency car
more miles—
less gasoline—
more comfort—
less weight—

E. W. Shank
107 MARKET ST.

AUTO STORAGE
First class, fireproof garage, open day and night. Rates reasonable.

Auto Trans. Garage
27-29 North Cameron St.

All Super-Six Racers to Finish Is Hudson Policy

"Hudson's fleet of Super-Six racers virtually will run 'from back of scratch' in all the important events this year," said L. H. Hagerling, Hudson representative. "The handling, self-imposed. In order to satisfy Hudson aims, all of the great races must finish."

"When one considers the comparatively small percentage of racers in the big speed events which finish at all, it is at once apparent that the Hudson has assumed almost an impossible task."

"But in winning all worthwhile records last year the Hudson was never extended to the limit of its endurance. There always remained a big reserve of power and endurance that was never required even in those terrible tests."

"This year, therefore, the Super-Six will be put to the greatest test. Long distance races at frightful speeds will be required of the cars—and all must finish to satisfy Hudson. An honest exposition of these qualities of endurance and endurance of the names demands that the race cars adhere to Super-Six stock structure. This has been done. The principal change is in shortening the chassis. The Super-Six racers will be fitted against specially constructed freaks in which every quality has been subordinated to speed. They do not even distantly resemble the stock cars of the names they bear. Therefore their performance signifies nothing of what can be expected of their stock car. In the course of a year of ordinary car usage, one of these cars would consume thousands of dollars in fuel."

"But the qualities which the Super-Six racers will demonstrate in these speed events are the same that the purchaser of a Super-Six stock car gets. That is why the Hudson did not radically depart from stock car structure in building its racers."

"The Hudson does not expect to take first place in all of even a few of these races. But it does expect the Super-Six to maintain a high average speed—always among the leaders—and always to finish."

"That undertaking is so broad that it is perfectly honest it must be qualified. Hudson knows the Super-Six, and knows the capabilities of enduring the most terrific trials of speed and endurance, and always to finish. But there are the chances of the track, over which no amount of scientific building has the power to triumph. catastrophe, spraddling across the course of a fast-flying Super-Six, may involve it also. Bar those chances all Hudsons will finish. The makers are confident of that because they know the Hudson cars. And Hudson owners everywhere are confident of it because they know the Hudson Super-Six, also."

Jeffery Quad Solves Difficult Haulage Problem

Because a Jeffery Quad proved its ability to negotiate the heavy mud roads leading into a tract of timber near Erie, Pa., after teams and rear drive trucks had been abandoned in despair, the Conneaut Shovel Company of Conneaut, Ohio, saved 40,000 feet of first quality white ash.

"We purchased this timber under a contract with a teaming concern to haul the logs into Erie at \$7.50 per thousand loaded on the train," says G. W. Benton, secretary, treasurer and manager of the Conneaut Shovel Company, in a letter to C. W. Nash, president of the Nash Motors Co.

"The teamsters went into the woods with three big teams and worked two months. At the end of that time they had made no advancement and we were forced to loan them money to continue their contract, incidentally advancing \$10,000. They finally threw up the contract."

"We then tried to sub-let the job but found that it was impossible to get anyone to undertake it. I called a directors' meeting and laid the case before them. They suggested trucks. The writer went personally to several of the big motor truck factories and asked for demonstrations. But I found that none of the rear drive units could hope to cope with the problem."

"Then I went to Kenosha and saw a Jeffery Quad performing in the demonstration the truck was loaded down with pig iron and driven down to a dump field where dumping from various excavations had been piled. When we arrived at this field the demonstrator simply turned at a right angle to the curb line and the truck waddled up the curb, across the sidewalk and into the field. Through piles of loose earth that came up to the body, through mud holes, over railroad ties the truck kept on its way as if this was a usual performance. But after watching the test I was convinced that I had found the solution of our hauling problem."

"When we tried the Quad on the timber we found that we could bring the logs from the woods, where all teams, trucks and automobiles gave up in despair. We even drove it into a moulding sand pit where no team has ever been able to pull a load out and where four teams of mules, hauled with a light wagon. We backed through this pit when one end of the truck was sunk so far down that the frame dragged on the sand. But the Jeffery quad pulled out without scarcely an effort."

The Sun Never Sets on the Briscoe

Most everybody is familiar with the proud boast of the English, which states that the sun never sets on the English flag.

Briscoe cars also claim this distinction as they are now sold in fifty-one foreign countries, islands and colonies. Regularly established dealers are to be found in Algeria, Antigua, Argentine Republic, Australia, Barbados, Bolivia, British East Africa, British Guiana, Chile, China, Cochinchina, Cuba, Curacao, Denmark, Dominican Republic, Dutch Guiana, Ecuador, Egypt, England, France, Gibraltar, Grenada, Hawaii, Holland, Hungary, India, Japan, Java, Mexico, Morocco, Newfoundland, New Zealand, Norway, Peru, Phillipines Island, Russia, Siam, Martin, Salvador, Scotland, Siam, South Africa, Spain, Straits Settlements, Sumatra, Sweden, Switzerland, Trinidad, Uruguay, Venezuela, and Wales.

The Briscoe car being of French origin and design is very popular with foreign buyers, whose discriminating taste has been developed by the higher priced machines manufactured and used extensively abroad.

It would require a search through a pretty big Atlas to find many places of importance on mother earth where Briscoe cars are not to be seen in gratifying numbers.

Three Super-Sixes Added to Japan's Imperial Fleet

The Emperor of the Flowery Kingdom rides in a Hudson Super-Six. It is the only American built car attached to the Imperial Household of Japan.

The first Hudson Super-Six—a Limousine—was purchased for the imperial household a month ago from the Japan Automobile Company, Hudson distributors in Japan. Within two weeks two others were added, a town car and a town car landaulet. They are for the emperor's personal use, and it is reported that the selection was dictated by him, although of course, attaches of the household made the purchase.

The prestige accorded to the Hudson Super-Six in Japan through its selection by the emperor can scarcely be estimated by Americans, unless they know the idolatrous esteem in which the ruler is held by his subjects.

Willys-Overland Announces Staggered Door Type Sedan

The Willys-Overland Company of Toledo, Ohio, is now building a staggered-door type of convertible sedan body on its Willys-Knight Four chassis.

The doors in this type of body are placed so that the entrance for the passengers is located in the middle of the car on the right side, giving the passengers an unobstructed passage-way to their seats.

The driver's door, however, is at the front of the car, on the left side, so that he enters or leaves the automobile.

Up to the time of the introduction of this type of body, the convertible sedans were equipped with doors on each side in the middle of the car.

It is expected that the installation of staggered doors will add to the popularity of the Willys-Knight sedans which already have become one of the most admired types of the comprehensive Willys-Overland line.

Touring Sedan Has Proven Practical For Summer

With the summer touring season on apace, another time-worn illusion—the closed car, has been dispelled. Heretofore, the only manner in which a single chassis could be utilized the year round, was to purchase two bodies of limousine and touring design and switch the two at the dictates of temperature.

The touring or convertible sedan has changed all this. It has long been demonstrated that the vast majority of motorists seldom lower the tops on their touring cars during an entire season. With this in view motor car designers brought forth the touring sedan with permanent top, and the driving public has welcomed the type with open arms.

Reports from the Chalmers Motor Company indicate an unprecedented sale of the Chalmers touring sedan model. It has proven to be the only type yet brought out that is called for

365 days in the year. Women motorists in particular, who have struggled with refractory "one man tops," during sudden summer showers, have flocked to the standard of the sedan, and their influence is seen in the record spring sale of these cars.

The all-glass construction of the body, which has rendered it a "sun parlor on wheels," in the winter months, is removed with ease and the interior is opened wide to the summer breezes. In the Chalmers sedan the driver's seat is of the club chair type, luxuriously upholstered. Next to the driver's seat, but separated by an aisle is a folding chair seat that swings back against the wall when not in use. Four other passengers are seated in comfort in the rear.

Many owners of touring sedans provide seat covers of light weight khaki or other material for the touring sedan in the summer months. This keeps the upholstery free from dust and dirt and in readiness for its cooler weather role of closed car during the winter months.

luxuriously upholstered. Next to the driver's seat, but separated by an aisle is a folding chair seat that swings back against the wall when not in use. Four other passengers are seated in comfort in the rear.

Many owners of touring sedans provide seat covers of light weight khaki or other material for the touring sedan in the summer months. This keeps the upholstery free from dust and dirt and in readiness for its cooler weather role of closed car during the winter months.



GORSON'S USED CARS
SPRING IS HERE. Now is your opportunity to enjoy comfortable motoring. Our salesrooms are filled with wonderful auto bargains. Every car in our complete stock is up-to-the-minute and guaranteed, both for service and quality.

LARGEST USED CAR DEALERS IN AMERICA.

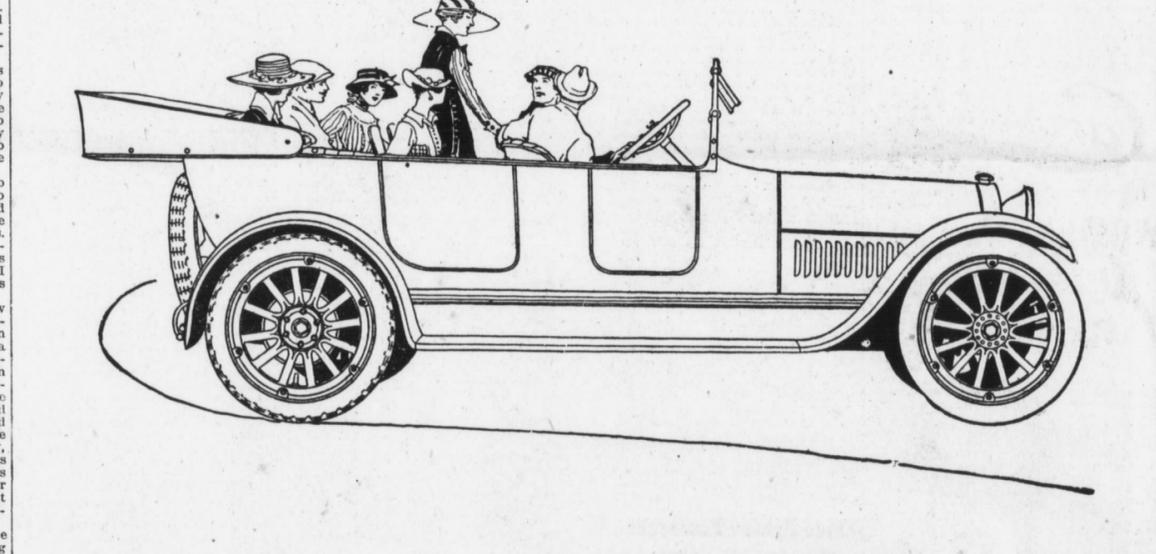
1916 Brand-new DODGE Roadster; electric lights and starter; over 20 miles to a gallon of gasoline; original price \$250; our price, \$235.	1916 BUICK '6' Touring; cracker-jack shape; all electric equipment.
1917 OAKLAND '27' Touring; brand new; bargain.	BUICK Roadster; nice running order; good tires; \$275.
1917 GRANT Touring light '6'; all up-to-date equipment.	1916 DODGE Touring; mechanically tight; lots of extras.
1917 PAIGE Touring "Fairfield" Six; only slightly used; ASP.	1916 METZ Touring; just like new; costs little to run; \$275.
1917 HUPMOBILE Touring, 7-pass.; shows no wear whatever.	MEZ Roadster; lights and starter; overhauled; \$285.
1917 BRISCOE Touring, 8-cyl.; roomy; 5-pass.; attractive; \$400.	1914 REO Touring; A-1 from Radiator to rear axle; \$500.
1917 CHALMERS Touring; A-1 from start to finish; extra tires.	FORDS, all models; \$100 to \$250.
1917 MITCHELL Touring, run 2300 miles; can be bought right.	1916 STUDEBAKER Touring; perfect condition; 8-cyl.; 7-pass.; perfect condition.
1917 CHANDLER Touring; slightly used; excellent condition; at a sacrifice.	1916 HERRAL SEDAN; also Summer top; electric equipment.
1917 SUPER-SIX HUDSON, run 3000 miles; extra equipment.	1916 MAXWELL Touring; four good tires; one-man top; rims.
1917 PULLMAN Touring, light 5-pass.; low up-keep; \$475.	MAXWELL Roadster; 3-pass.; nice condition; 2 extra tires; \$200.
1917 STUDEBAKER Touring; 6-cyl.; plenty of power; complete equipment.	1916 COLE '8' Touring; divided front seats; sun covers, etc.
1917 OLDSMOBILE '5' Touring; fine running order; very attractive.	1916 CHEVROLET Touring; Royal Mail; cracker-jack shape; \$325.
1917 OAKLAND Touring "Light Six"; practically brand-new; bargain.	1916 MEHNER Speedster; very fast; five new tires; wire wheels.
	1916 OVERLAND Touring; roomy 5-pass.; lots of extra equipment.
	1916 HUDSON Touring, 6-40; A-1 condition; big bargain.

GORSON'S AUTOMOBILE EXCHANGE
238-240 NORTH BROAD STREET, PHILADELPHIA
Open Sunday 9 to 2. Representatives Wanted. Write for Free Bargain Bulletin.

FREE Tests and Water For STORAGE BATTERY and EXPERT REPAIRS
at **FRONT-MARKET Motor Supply Co.**
109 Market St.
Prest-o-lite Battery Service

DODGE
5-Passenger Touring \$695
3-Passenger Clover Leaf Roadster \$695
Ensminger Motor Co.
THIRD AND CUMBERLAND STS.
Bell Phone 3515

PAIGE
The Standard of Value and Quality
Fairfield "Six-46" seven-passenger.
Fleetwood "Six-38" five-passenger.
E. L. COWDEN
R. J. CHURCH, Salesmanager
108 Market Street



The Studebaker SIX
—An Evolution

THE Series 18 Studebaker Six is an evolution. It is the result of four years' concentrated study of the performance of 300,000 Studebaker Automobiles in the hands of owners.

It is even better than the Series 17, for it embodies ninety distinct improvements of mechanical construction, convenience and comfort.

It has been refined to a point of practical perfection. It is the lightest car in ratio to its power on the market.

In ratio to power it is the most economical in consumption of gasoline. Its weight is scientifically distributed, its balance refined to such a point that a single set of tires frequently runs from 8,000 to 12,000 miles.

Driscoll Auto Co.
147-155 South Cameron Street
HARRISBURG, PA.

Four-Cylinder Models	
FOUR Roadster	\$985
FOUR Touring Car	985
FOUR Landau Roadster	1150
FOUR Every-Weather Car	1185
All prices f. o. b. Detroit	

Six-Cylinder Models

SIX Roadster	\$1250
SIX Touring Car	1250
SIX Landau Roadster	1350
SIX Touring Sedan	1700
SIX Coupe	1750
SIX Limousine	2600
All prices f. o. b. Detroit	