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AUTOMOBILE NEWS

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Features

SHORTAGE OF FUEL SERIOUS

Acute Situation Faces Motor Car Manufacturers—Light Car May Solve Problem.

TOLEDO, Ohio, May 29.—From time to time, we hear the cry that fuel shortage is imminent. Usually we shrug our shoulders and say it probably presages rise in the price of gasoline. A study of the situation however reveals a condition which is far from reassuring and which shows that the possibility of a shortage is some much more definite than a rumor.

The total domestic production of gasoline in the United States in 1923 was 7,555,945,145 gallons and domestic consumption was 6,355,025,280 gallons of which the motor car used better than 80 per cent.

gasoline was increased to 8,359,680,220 gallons with a domestic consumption of 7,780,625,085 gallons of which the motor cars of the country again used better than 80 per cent.

Increase Noted
In the same period, the increase in registrations over the preceding year was 17% showing that the tax a car on our domestic production of fuel was increasing in greater ratio than our car production and registration. In other words each car owner was making his automobile drive him a few miles more each year, at a cost to the productive capacity of the country in fuel, of something like one gallon of gas for each 15 extra miles covered.

In 1925 the productive capacity of our oil companies has been strained to the limit with a constantly increasing drain on the amount of fuel developed. By the end of 1925 when there would be 20,000,000 motor vehicles registered in this country there is likely to come a line between production and consumption, so thin that the two will just about rest on the same figure.

No less an authority than W. T. Thom Jr., of the United States geological survey has predicted

that, within the next ten years, the diminishing supply of gasoline will have brought the cost of operating an automobile out of reach of the pocketbook of the average citizen.

Time to Prepare is Now
He says in part, "the time to prepare for the threatened shortage is now, not when the shortage actually occurs. Obvious methods of meeting the threat are more economical cars. If the automobile engineer can produce a car that will give 1,000 miles of operation on half the gasoline now required to do that distance, the effect is to double our fuel supply. The average car today will give greater mileage per unit of fuel than the cars of even five years ago. There are signs that still greater economies on this side will come."

The average car of today is a lighter car than that of five years ago. It has a smaller motor, more efficient carburetion, a higher speed motor and therefore greater fuel efficiency. But at the present time we are not getting, as a national average, much better than 15 miles to the gallon, enthusiastic claims of owners and manufacturers to the contrary.

European Car Discussed
This all brings to mind the discussion of the European small car, redesigned by American engineers for American use. In Europe, petrol costs twice as much as its synonym, gasoline, here. But the European car goes twice as far on the same amount of fuel. So the cost per mile is not greater than here.

We can get the double mileage here by adopting the salient features of the Europeans light car motor and combining it with our own methods of building chassis and bodies. The answer would appear to be reasonably simple. The European builder gets his high motor efficiency by using a small bore, a long stroke and building his motor to operate at high speed. He puts this motor into a chassis of reasonable length and builds a body to suit.

The American car using public must accustom itself to a car considerably smaller than the majority of those we see on the streets now. If we are going to continue to use cars in the same, steadily increasing numbers.

This diminution in size need not necessarily affect the comfortable seating arrangements inside the bodies for it is certain that the American adaptation of the European type of car will have our

HENRY FORD ON FORESTRY

Henry Ford may not be, personally, the industrial miracle-worker that a reader of his latest book might suppose; but certainly the processes described show American industrial development at its best, and make it clear why American industry leads the world.

Take the single matter of lumbering, not ordinarily associated with the automobile industry. Needing large quantities of wood, Ford bought several hundred thousand acres of timber land. Old lumbering methods were found wasteful. So instead of chopping down the trees or sawing them down by hand they cut them down with a band saw operated by a portable gas engine. In one-twentieth of the time it used to take, and saved a couple of extra feet of stump for lumber. The brush is all burned immediately, to prevent fires, and give new growth a chance to get started promptly. In spite of a tradition that it "can't be burned green." Tractors are used for logging. Instead of horses, and prove six times as efficient. The logging camps are made clean and decent, and the loggers are paid higher wages, so a better class of loggers develops.

Sawmills and drying kilns are established in the woods, to save hauling sawdust and water. A new system of cutting makes an immense saving of lumber. Planks are sawed with the bark on, then wooden automobile parts are marked out on these planks like parts of a jig-saw puzzle, and cut out with a hand saw, taking advantage of every peculiarity in the plank's shape. Then the parts, already shaped, are dried in kilns near by and shipped to the factory for assembling. Large branches, too, are used.

"We calculate," says Mr. Ford, "that this method will make our forests last one-third longer than under the old way of sawing, and perhaps they will last forever if we learn how to reforest properly." Improvement can always be made, if an old problem is tackled anew, by intelligent men, free from preconceived ideas, and using the best knowledge and methods of modern engineering. Our industrial age has only begun.

standard tread of 56 inches and that the wheel base will be about what we have become accustomed to in our small cars.

Smaller Small Car
But, if we adopt the European type power plant, we will have much faster small cars than we have now and this will require lower bodies with wind cutting lines which will be quite an innovation in our small car design.

In the past it has been a case of designing a car to use gasoline. The future looks as though the gasoline would flare back and, in a measure, force a type of design which will enable us to continue to have gasoline to use.

To have this car merely a small car will not be enough. It will have to be a small car engineered along the lines which have proved to be conducive to 25 to 30 miles to the gallon of fuel in countries where fuel comes high in price.

Durant Official Visits In State of Washington

OAKLAND, Cal., May 29.—The entire state of Washington is occupying a dominant position in Pacific coast business this year, and is one of the brightest spots in the country, according to Ernest S. Jones, sales manager of the Durant Motor company of California, who has just returned from a trip to Seattle and other northern cities.

It was Jones' first visit into the northwest territory, which he has covered for many years as a field representative, since he was recently appointed to his present position.

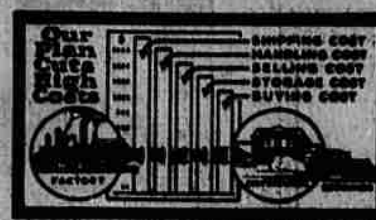
The Star car dealers are in a healthy condition all over the Pacific coast, he stated, and spring and summer business throughout the automobile trade has recovered quickly after a slow business period early this year.

James Houlahan, Star car advertising counsel, was another recent visitor to the northwest territory and has left for a tour of the Southern California territory.

Drill a hole in the clutch pedal lever, close to the floor board, and insert a padlock in the hole. Of course the car could be towed, but it could not be driven under its own power, as done in the majority of thefts.

Always use low gear when starting the car in motion. This will eliminate the necessity of slipping the clutch, which is not only hard on the clutch facings, but also strains the engine.

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The Diamond Tires you buy here are sold at "straight line" prices. Bought from the factory—sold to you.

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30x4.75 S. B. ...\$18.95	30x3 1/2 Ex. Size Cl. ...\$10.00
30x4.95 S. B. ...\$19.15	30x3 1/2 Ex. Size S. B. ...\$12.40
31x4.95 S. B. ...\$19.35	31x4 S. B. ...\$11.00
32x5.25 S. B. ...\$20.30	32x4 S. B. ...\$10.15
31x5.25 S. B. ...\$21.90	32x4 S. B. ...\$10.15
32x5.75 S. B. ...\$23.10	32x4 1/2 S. B. ...\$12.45
32x6.00 S. B. ...\$29.55	32x4 1/2 S. B. ...\$12.45

Ford Sizes	
30 x 3 Cl. Titan Cord	\$ 8.70
30 x 3 1/2 Cl. Titan Cord	\$ 9.75
30 x 3 1/2 Cl. Reg. Size Diamond Cord	\$12.30
30 x 3 1/2 Cl. Ex. Size Titan Cord	\$10.90
30 x 3 1/2 CL. HEAVY SERVICE Cord	\$14.35
BALLOONS	
29 x 4.40 S. B. Balloon Cord	\$13.35
31 x 4.40 S. B. Balloon Cord	\$16.95
(Replaces 30 x 3 1/2)	

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Coach at a One-Profits Price—
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IN the quality Coach, illustrated, One-Profits savings enable Studebaker to offer you at \$1195, important features in equipment and construction not excelled by cars costing double its price. In comparing Coach values, consider these Studebaker features:

Abundant power—No other car in the world of its size and weight can show horsepower rating equal to that of the Studebaker Standard Six Coach. Twenty-eight makes of 5-passenger enclosed models cost from \$100 to \$1990 more than the Standard Six Coach and have less rated horsepower.

Notice the high quality upholstery, compare the depth of Studebaker cushions and seat backs with other cars costing much more. Inspect the interior workmanship.

Finer body construction—first grade northern white ash and hard maple are used in the body construction. Body joints are mortised, tenoned, glued or screwed.

Costly alloy steels—we pay a premium to secure steel of extra quality. A bar of Studebaker alloy steel the diameter of a dime will stand greater strain than a bar of ordinary steel the diameter of a dollar. This insures greater dependability with longer life and lower upkeep cost.

Completely machined crankshaft—a feature usually found only in the highest priced cars. It costs Studebaker \$600,000 a year to perform the extra machining. But it reduces engine vibration to a minimum, and thereby produces notable smoothness of engine operation.

Compare Studebaker fenders—the weight of the steel used, the width and depth of the crown and skirt and the 14 bolt fastenings.

The pressed-steel instrument board is backed by wood so it won't rattle or vibrate.

Plate glass of the highest grade is used in the windows. It is mounted in live rubber, preventing leaks, drafts, rattles and vibration.

Spark control is automatically regulated by the speed of the engine. The spark lever is thus made obsolete and is replaced by a safety lighting switch on the steering wheel.

There is a master lock which locks the ignition and steering control in one operation. The same key locks the door and spare tire carrier.

Oil filter, gas strainer and air cleaner seal the engine against foreign matter. Water-proof fountion further insures highest degree of engine efficiency.

The oil drain valve on a Studebaker is conveniently placed under the hood. Oil can be drained without getting under the car.

Complete equipment includes a gasoline gauge on dash, automatic windshield cleaner, rear-view mirror, foot-operated cowl ventilator, stop light and dome light.

To appreciate this fine car you must drive it. Experience the thrilling power in the Standard Six engine. Compare its riding, steering-driving ease with any car. We will gladly supply you with a Standard Six Coach that you may drive yourself. Studebaker's Budget Payment Plan offers time-payment rates as low as any known to the motor world.

The lowest price ever placed on an enclosed car by Studebaker

STUDEBAKER builds all its own bodies, all engines, all clutches, gear sets, springs, differentials, steering gears, brakes, axles, gray-iron castings and drop forgings. Only Studebaker in the fine-car field enjoys such complete manufacturing facilities.

One-Profits value
These facilities enable Studebaker to manufacture quality cars on a One-Profits basis—eliminating outside profits. The savings thus effected are passed on to Studebaker owners in the form of higher quality at lower prices.

Unit-Built construction
Studebaker facilities result, too, in cars designed, engineered and built as units. The hundreds of parts in a Studebaker function as a smooth-working unit, resulting in scores of thousands of miles of excess transportation, greater riding comfort and higher resale value.

Always kept up-to-date
Direct manufacturing control enables Studebaker to keep cars constantly up-to-date. We add improvements regardless of the calendar—we do not save them up for spectacular annual announcements which make cars artificially obsolete.

M. J. Goss