Sales FACTS

Let's take a look at the Oldsmobile "Rocket" Engine and compare it with the Hudson Super-Six and Super-Eight Engines which produce more power to car weight and . . . much more power per cubic inch

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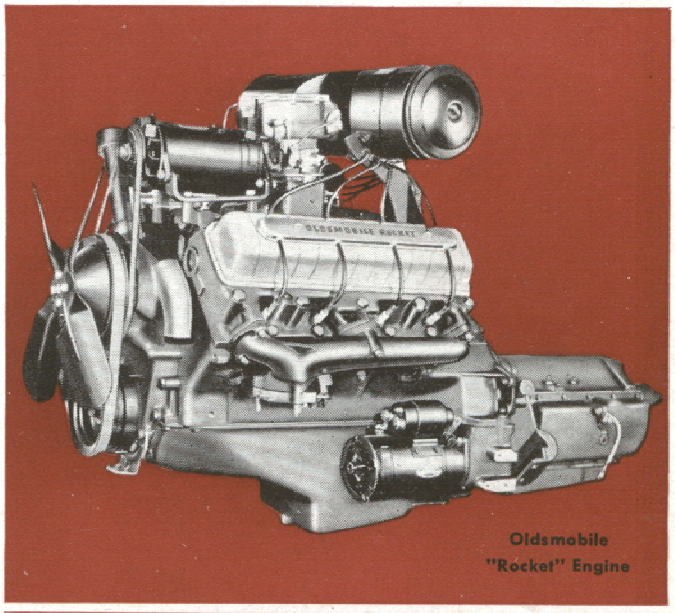
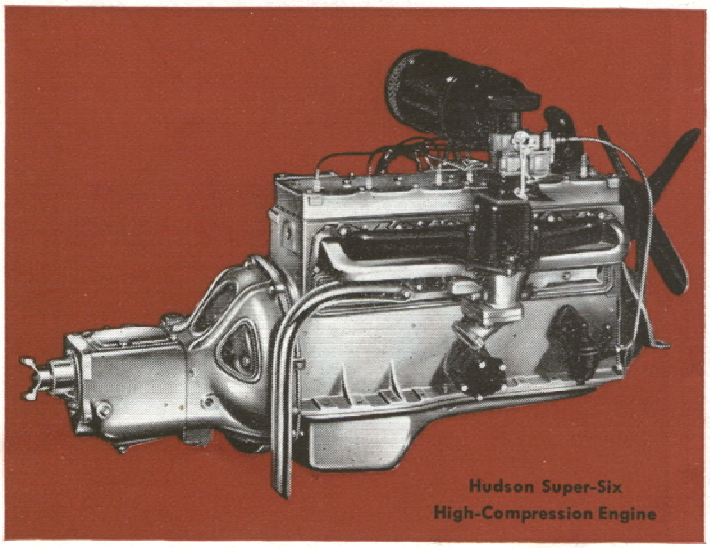
1949 Olds "Rocket" Engine Develops Less H. P. Per Cubic Inch Than 1948 Olds Engine

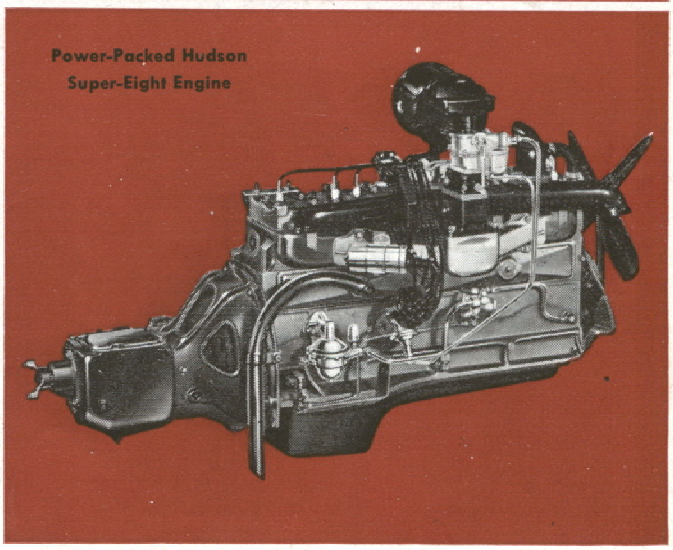
Both the Hudson Super-Six and Super-Eight engines show many advantages over the 1949-series Oldsmobile "Rocket" engine. The horsepower developed per cubic inch in the 1949 "Rocket" engine is actually lower than that developed in Oldsmobile's "biggest" 1948 Futuramic engine of 115 horsepower.



Oldsmobile "Rocket" Engine



Hudson Super-Six High-Compression Engine



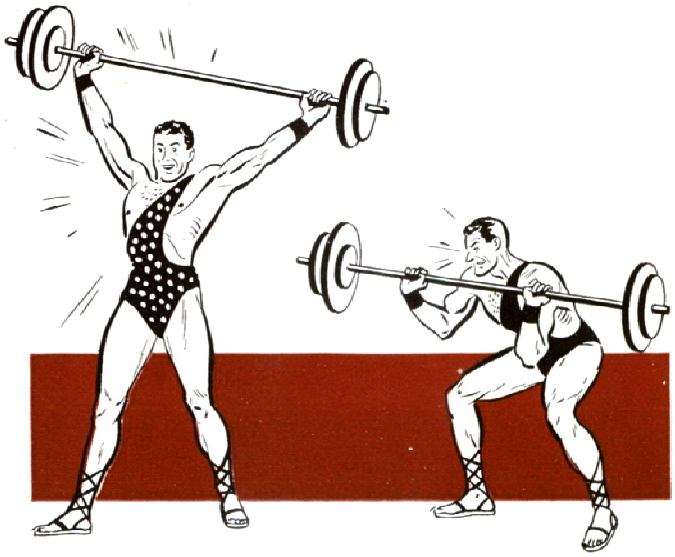
Power-Packed Hudson Super-Eight Engine

CONFIDENTIAL: This bulletin will provide Hudson salesmen with exclusive information regarding Hudson advantages over competitive makes. It is not intended to be shown to prospects. This information has been secured from the most reliable sources but cannot be guaranteed. July 15, 1949.

HUDSON SUPER ENGINES ARE MORE EFFICIENT

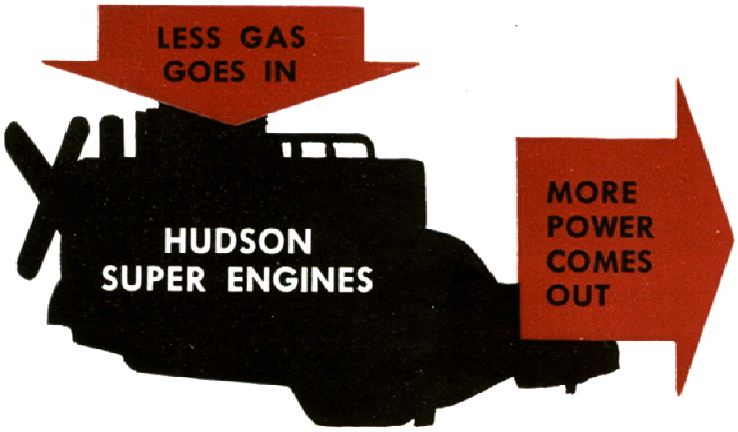
Despite the avid claims by Oldsmobile engineers for this "Rocket" power plant, it develops much less power per cubic inch than either the Hudson Super-Six engine or the Hudson Super-Eight engine. Both Hudson engines also PRODUCE MORE POWER PER POUND OF CAR WEIGHT than the Oldsmobile "Rocket" engine. Both Hudson engines are also more economical to operate than the "gasoline-eating" displacement of the "Rocket" engine.

Compare the 303.7 cubic inches of Olds "Rocket" piston displacement with the smaller, more economical, Hudson piston displacement of 262 cubic inches in the Hudson Super-Six engine and 254 cubic inches in the Hudson Super-Eight engine. Comparison readily proves that power is not a matter of engine size.



Size alone is not an indication of strength or power. In automotive engines, the real gage of power and efficiency is the horsepower output in relation to piston displacement. Hudson exceeds Oldsmobile on this count.

HUDSON ENGINES DEVELOP MORE H. P. PER CUBIC INCH



Hudson Super engines develop more horsepower per cubic inch of displacement than the Oldsmobile "Rocket" engine.

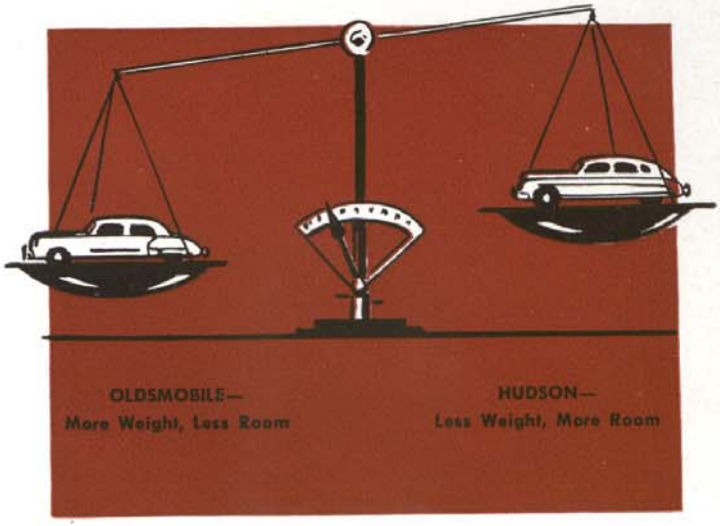
Engine efficiency is the real gauge of power. This may easily be determined by comparing the horsepower developed per cubic inch of engine size. The Futuramic 8-cylinder "Rocket" engine develops only .445 h.p. per cubic inch as compared with .462 h.p. per cubic inch for the 121 h.p. Hudson Super-Six engine. The Hudson Super-Eight engine develops .504 h.p. per cubic inch. Simple arithmetic shows that the added Hudson efficiency is 4% more horsepower per cubic inch for the Super-Six over the "Rocket" engine and 13% more horsepower per cubic inch for the Hudson Super-Eight engine. Considering the fact that the Hudson engines also have smaller bores, the percentage of greater efficiency per horsepower, magnified by the gasoline saved in the Hudson engines, shows a tremendous advantage over the Futuramic.

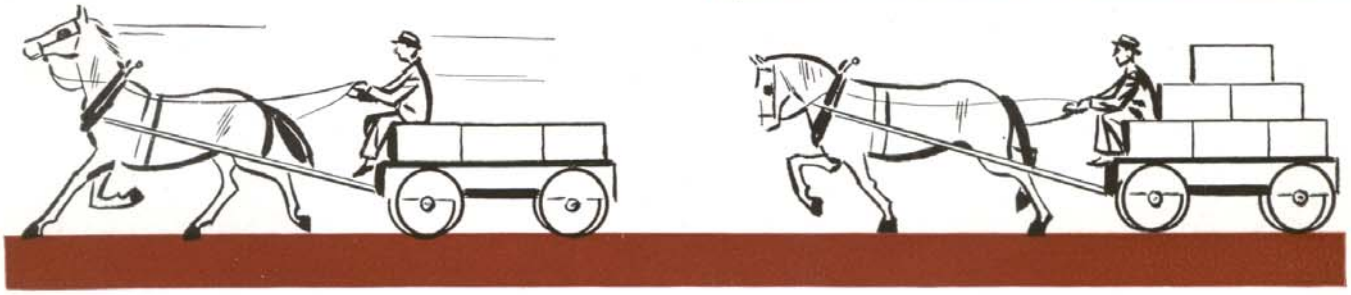
POWER-TO-WEIGHT RATIO

Despite the greater horsepower developed per cubic inch in the Hudson Super-Series engines over Oldsmobile Futuramic "98" engines, both the Hudson Commodore Custom Six and Commodore Custom Eight cars weigh less than the Oldsmobile Futuramic.

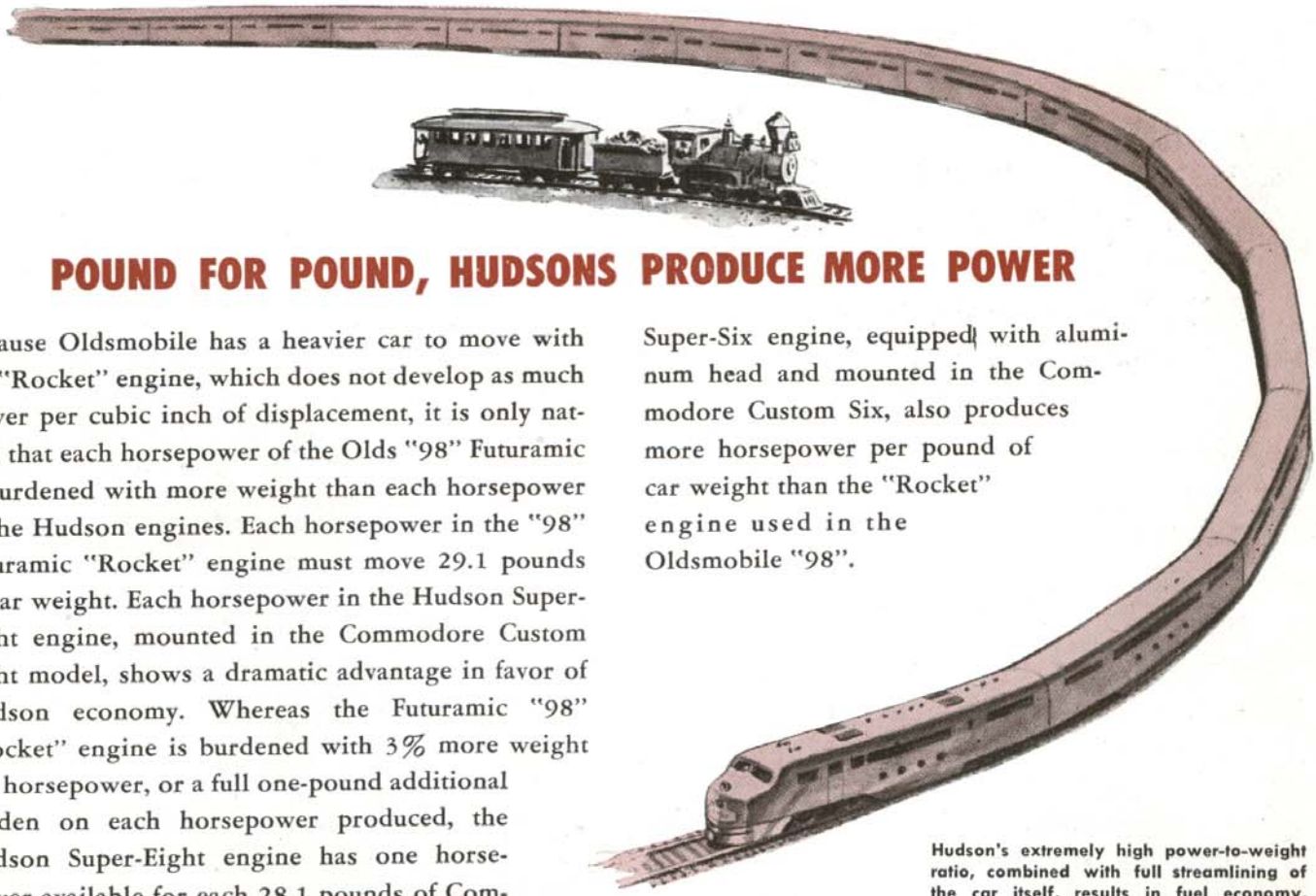
A careful and impartial comparison discloses that the saving in weight in the Hudson-built cars has been gained through the elimination of useless weight without sacrifice of structural strength. Statements made by Oldsmobile salesmen indicate that efforts are being made to reduce the weight of the Futuramic. The Futuramic "98" 4-door sedan weighs 3925 pounds and is 300 pounds heavier than the Hudson Commodore Custom Six and 275 pounds overweight as compared with the Hudson Commodore Custom Eight.

Extra car weight in the Olds "98" places an added burden on each functioning unit and affects the performance and economy as a whole. Extra power is required to start and move these additional 275 to 300 pounds and *MORE GASOLINE* is consumed in producing the extra power. To equal the performance of the Hudson-built, Commodore Custom Series cars which have less weight, the Oldsmobile Futuramic would have to develop more horsepower per pound of car weight. This is not the case, however.





Hudson Super engines, with a higher power-to-weight ratio than the Oldsmobile "Rocket" engine, have less weight to start and move for each horsepower developed.



POUND FOR POUND, HUDSONS PRODUCE MORE POWER

Because Oldsmobile has a heavier car to move with the "Rocket" engine, which does not develop as much power per cubic inch of displacement, it is only natural that each horsepower of the Olds "98" Futuramic is burdened with more weight than each horsepower in the Hudson engines. Each horsepower in the "98" Futuramic "Rocket" engine must move 29.1 pounds of car weight. Each horsepower in the Hudson Super-Eight engine, mounted in the Commodore Custom Eight model, shows a dramatic advantage in favor of Hudson economy. Whereas the Futuramic "98" "Rocket" engine is burdened with 3% more weight per horsepower, or a full one-pound additional burden on each horsepower produced, the Hudson Super-Eight engine has one horsepower available for each 28.1 pounds of Commodore Custom Eight car weight. The Hudson Super-Six engine, equipped with aluminum head and mounted in the Commodore Custom Six, also produces more horsepower per pound of car weight than the "Rocket" engine used in the Oldsmobile "98".

Hudson's extremely high power-to-weight ratio, combined with full streamlining of the car itself, results in fuel economy, greater performance, extra driving ease and pleasure.

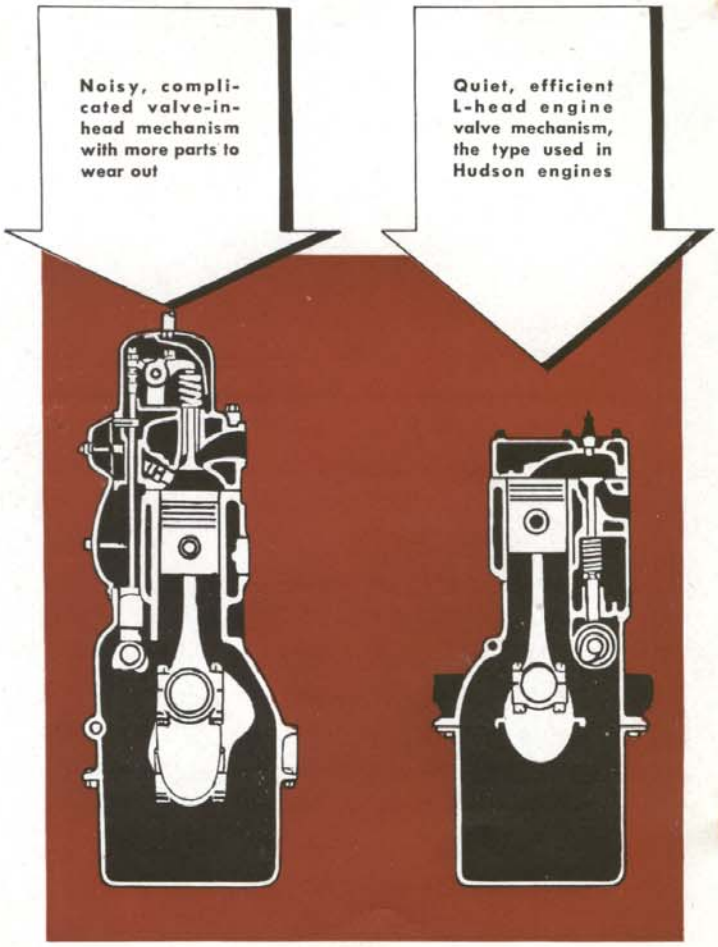
HUDSON HAS COMBINED "HIGH COMPRESSION" WITH ECONOMY

Chief among General Motors claims for the "Rocket" engine is that *"some day,"* when 100-octane gasoline becomes available, it will save a high percentage of the gasoline now required to keep the Olds "98' Futuramic running. Hudson offers the customer a high-compression engine PLUS economy of operation *NOW!*

Making the most economical and efficient use of today's 82-octane gasoline, Hudson's masterful Super-Eight engine has a compression ratio of 7.0 to 1 with aluminum head. Hudson's Super-Six engine—most powerful American Six—has a compression ratio of 7.12 to 1 with aluminum head. The Oldsmobile "Rocket" engine has a present-day compression ratio of 7.25 to 1. However, compression ratio is only one requirement for engine efficiency and performance. The real measurement of a superior engine is power output per cubic inch of piston displacement, and in that respect, Hudson Super engines are far ahead of the Oldsmobile "Rocket" engine as we saw above.

Adapted for higher compressions and using 100-octane fuel—the highest which the petroleum industry has indicated that it may produce—Hudson Super-Eight and Super-Six engines will be supplied with a compression ratio of approximately 9.3 to 1. If fuels of higher octane rating than 100 become available, the requisite compression will be provided in the Hudson Super-Eight and Super-Six engines, which are in reality high-compression engines capable of providing compression ratios up to 12.5 to 1 with suitable gasoline.

The Hudson high-compression engines utilize the L-head principle, which has many advantages in economy over the valve arrangements used by Oldsmobile in the "Rocket" engine. The Hudson engine has fewer parts and an L-head engine will develop more horsepower in an automotive engine than any other type of valve arrangement and is less costly. The particular advantage of the L-head principle in a high-compression engine is that it permits the use of an aluminum cylinder head, whose heat dissipating characteristics permit even higher compressions than possible with the design used in the "Rocket" engine.



FORM AM-4920 15M—7-49 PRINTED IN U.S.A.