

Stealing the V8's Thunder

Tired of pushing an underpowered car? Put thunder under your hood by transplanting an OHV V8

BY JIM POTTER

DO YOU FREQUENTLY CHECK to see whether your emergency brake is on—even when you seldom use it? Unconsciously, many drivers do just that, especially when they have an engine that is tired or overworked.

To remedy this situation, you have several alternatives: You can continue to suffer from the illusion that your emergency brake is on; trade in your car on a new one; modify your engine for improved performance; or transplant some horsepower by converting to a different engine.

The latter alternative often provides the most economical and satisfactory solution. This is particularly true if you have developed an unusual fondness for your present car, yet dislike having your heart beat violently while driving up a mild five-degree grade because of lack of power.

Two factors enter into determining the cost of transplanting horsepower. The first is the price of the new engine, minus whatever can be obtained for your present engine. It's obvious that the price to be paid for a new, or fairly new, engine will generally depend upon where and how it is purchased. Late-model engines can often be bought, with but a few thousand miles on them, from wrecking yards at a fraction of the normal retail price. The number of engine accessories which are included in this type of purchase can make a difference of several hundred dollars. While prices vary from locale to locale, you can use our table (chapter IV) as a fairly accurate yardstick. We checked six different wrecking yards to obtain these "average" prices, which are governed on this type of item largely by supply and demand, the number

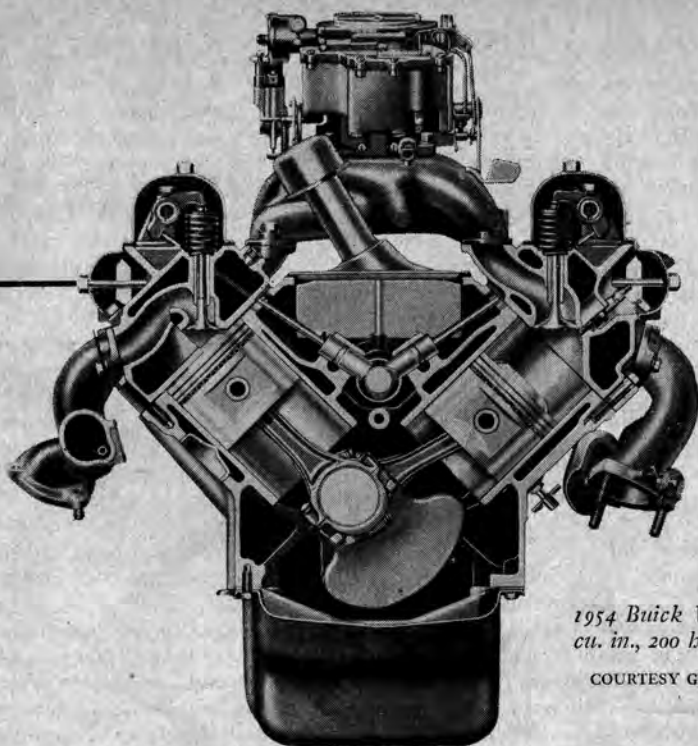
of miles on the engine, and its general working condition.

Factory recommended list price for the '55 Chrysler FirePower V8, without accessories, is \$637.30 f.o.b. Detroit. The same engine, complete with accessories, will run up to about \$800. Thus, whatever accessories can be salvaged from the original engine and used on the new one will mean a lower initial cost. Accessories can often be picked up at a bargain at wrecking yards.

Let's assume that you're ready for a new powerplant for your car, and you want an engine that's modern in design, economical to operate, and has a power output worthy of your going to the expense and trouble for the conversion. Selecting a powerplant is thus simplified because the trend is definitely towards the compact, ohv V8s.

The parade of ohv V8s began in 1949 with Cadillac and Oldsmobile at the head of the procession. In 1955 there were 18 different ohv V8s from which you could make your selection; of course, many of these are of similar design and produced by the same manufacturer for different models of cars. A study of the table in the following chapter will give you the basic specifications of the various engines so that you can determine your choice.

Increase in the popularity of the overhead-valve V8 engine is attributed to its compact size, rather wide but of very compact length, a shape which will fit most engine compartments without too many troublesome modifications, and the amount of power contained therein. Also of importance is the fact that the powerplant is readily adaptable for detail modifications to further increase the power output. It



1954 Buick V8 engine, 322 cu. in., 200 hp at 4100 rpm.

COURTESY GENERAL MOTORS

should be noted that the totally new engines evolved in recent years have all been of high power output, and they all have been of the overhead-valve V8 form.

You now have the widest selection of overhead-valve V8 engines ever before available to the public. Three manufacturers came up with entirely new ohv V8 engines from the engine mounts up. These were Chevrolet, Pontiac, Packard, and an almost wholly new series of Chrysler Corporation engines being used in Plymouth and some models of Dodge and Chrysler. The Packard V8 is also in the Nash Ambassador and Hudson Hornet.

Now that we have you ready to put out cold cash for an overhead-valve powerplant, here are details that will help you select the right one for the job.

BUICK

A small overhead-valve V8 was used in its Special series for the first time in '54; it's a small-bore version of the ohv powerplant introduced in '53 in the Super and Roadmaster series. Displacement is 264 cubic inches. Standard equipment on this engine is a two-barrel Rochester carburetor (it used a Stromberg until May, 1955). The 1955 engine puts out 188 horsepower. Unlike the

bigger Buick engines which use thinner head gaskets to kick up the compression ratios for automatic transmission, the Special achieves its high compression boost with higher-domed pistons.

Buick's larger engine (322 cubic inches) is used in its Century, Super, and Roadmaster series; its outside dimensions are slightly larger. Equipped with a larger four-barrel carburetor, it also has larger ported intake and exhaust manifolds, and higher lift cams. Boosted compression ratio (9 to 1) also contributes to horsepower increase, 236 hp at 4600 rpm.

Neither engine is available at Buick dealers in the "short block" assembly version. A short block usually consists only of the block, pistons and rings, connecting rods, camshaft and bearings, crankshaft and bearings. Buick's complete engine assembly includes all of the short block components plus the heads and pan, but not the accessories, including the fuel pump, carburetor, distributor, coil sparkplugs, wiring and air-cleaner.

In checking with wrecking yards, we found that Buick overhead-valve V8s were in considerable demand, mainly because of their wide reputation for fast-acceleration performance and long-life dependability.

CADILLAC

General Motor's top-quality car has the distinction of being one of the first (along with Oldsmobile back in 1949) with the most powerful crop of post-war overhead-valve V8 engines. More horsepower has been built into each successive year's engine to the present 250 hp at 4600 rpm. Constant improvements have been made in the engine; in '55 the compression ratio was upped from 8.25 to 1 to a thumping 9.0 to 1 with redesigned combustion chambers and a change in rocker arms to allow for wider valve openings.

The Eldorado engine has the same 331 cubic inches displacement as its lower-priced contemporaries, but the 270 horses (20 more) come from twin, four-barrel carburetors with new, flatter aircleaners, and a new intake manifold.

You can buy the short block assembly from Cadillac parts departments and add your own accessories, or you can purchase the complete engine assembly. The complete engine assembly from Cadillac is *really* complete; it includes all of the engine accessories (fuel pump, carburetor, distributor, wiring, aircleaner, starter, generator). Cadillac is one of the two manufacturers who quote a price that includes all of the accessories.

CHEVROLET

At last the lowest-priced car in the GM line has jumped aboard the overhead-valve bandwagon and joined the horsepower race along with the other two members of the "Big Three."

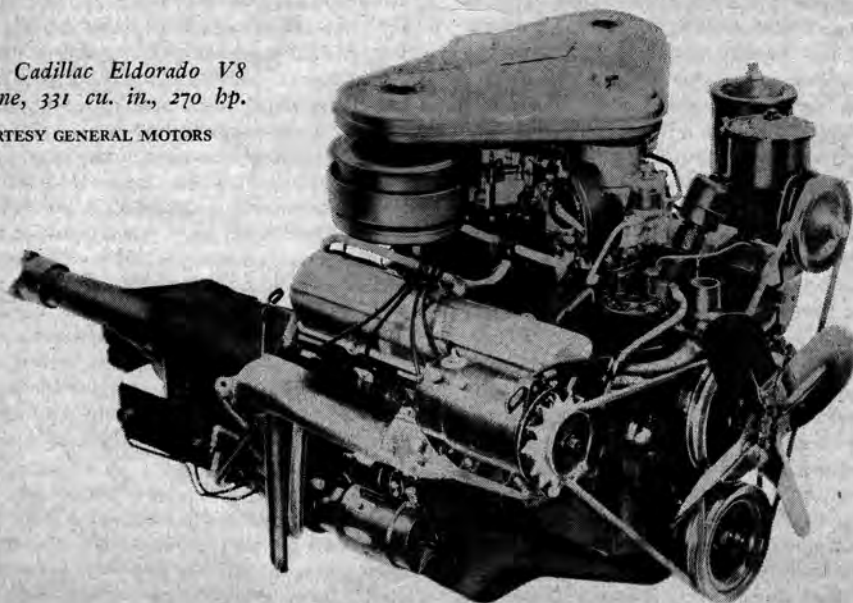
Though new in '55, the Chevrolet V8 has been undergoing extensive tests for about three years, both on the road and by destructive dynamometer tests. It looks like Chevrolet has a winner.

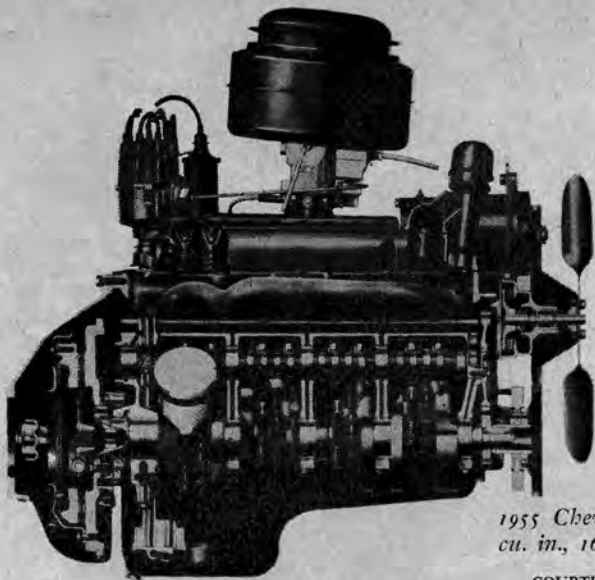
More compact in design than most, it still packs an amazing wallop in the performance department, which is second to none in its price class. The cylinder bore is 3.75 inches and stroke is a mere 3 inches, shortest in the industry, resulting in an "oversquare" stroke/bore ratio of .80 to 1. It squeezes 265 cubic inches of displacement out of a block not quite 22 inches long. Space-saving design innovations are evident everywhere you look.

For example, the intake manifold doubles as a tappet chamber cover. The engine doesn't depend on block overhang for rigidity as does Ford's current series. The lower extremity of the Chevy block is only about 1/10-inch below the centerline of the main bearing. This saves a lot of weight. In fact, Chevrolet has the smallest and lightest

1955 Cadillac Eldorado V8 engine, 331 cu. in., 270 hp.

COURTESY GENERAL MOTORS





1955 Chevy V8 engine, 265 cu. in., 162 hp at 4400 rpm.

COURTESY GENERAL MOTORS

engine, for its displacement, mass-produced in America today.

Advertised brake horsepower and torque are listed by the manufacturer as "gross" values (see table in chapter IV). Chevrolet also has published the "net" figures, and is the only company to do it. These net figures represent brake horsepower and torque with the engine in the "as installed" condition, including a "hot" carburetor, stock air-cleaner, stock exhaust system, automatic spark advance, and fan all connected and operating. "Net" brake horsepower is rated at 137 at 4000 rpm, and "net" torque is 235 pounds/feet at 2100 rpm.

You can buy two different V8s from Chevrolet, one for standard or overdrive transmissions, the other for automatic or Powerglide. Principal difference in the engines is in the valve lifters (solid type for standard-shift models, self-adjusting hydraulic type for the automatic-shift cars).

Chevrolet's "complete" engine assembly is fairly bare compared to Buick or Cadillac. For instance, for \$385 you only get the block, heads, pan, pistons, rings and camshaft; you buy all accessories separately. On the other hand, buying the basic engine enables you to supply or buy the kind of accessories you want for doing a particular job.

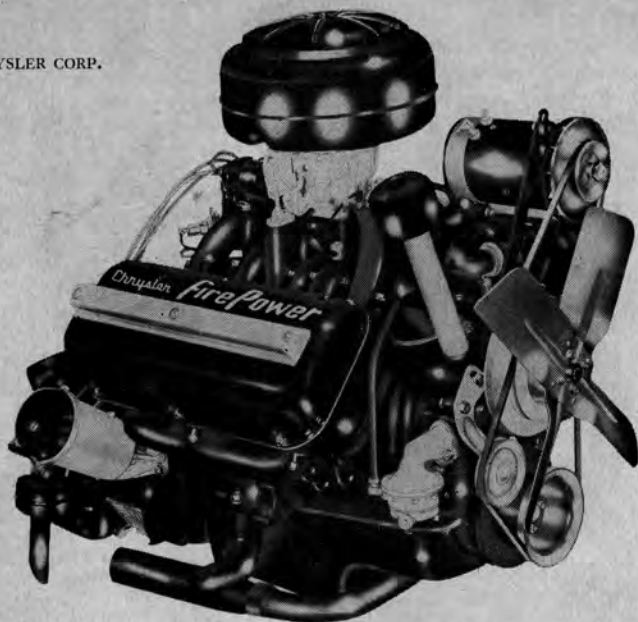
The high-performance package available at Chevrolet dealers includes a Carter four-throat carburetor, special intake manifold and dual exhausts, all of which will fit on

the standard Chevrolet engines without alterations. The intake manifold not only accommodates the four-throat carburetor but the area of the intake passages is 16 percent larger than the standard manifold. However, since the cylinder heads remain unchanged, the intake manifold passages taper down at the outer ends. A little diligent work with a hand grinder could extend the increased passage area into the heads as well as to take advantage of the increase. Price of the power package kit is about \$95.

With this kit, output is upped to 180 hp, a gain of 11 percent. "NET" power is up to 160 hp at 4200 rpm, or 14 percent. Gross torque is 260 pounds/feet at 2600 rpm, a gain of 2 percent. Torque is nearly a pound for every cubic inch of displacement, a figure heretofore unknown in the low-priced field. A power kit puts the Chevrolet engine among the leaders on a horsepower-per-pound-of-engine-weight-basis.

Tests made by MT Research (Dec. '54 MOTOR TREND) indicate that the Chevy overhead-valve V8 engine operates with unusual smoothness and quietness, especially the hydraulic tappet version. This can be attributed to a Chevrolet production "first"; every V8 engine that leaves the factory is electronically balanced *after* assembly.

Considering the Chevrolet V8's light weight (only 461 pounds) and unusually compact size for power output, it is an engine worthy of your careful appraisal.



1955 Chrysler V8 engine, 331 cu. in., 300 hp at 5200 rpm, approximate weight, 750 pounds.

CHRYSLER

In 1955, a new overhead-valve V8 engine replaces the six previously used in the Windsor series cars. Of similar basic design as Chrysler's larger powerplants, the major difference lies in the valve train and combustion chambers; these are only partially hemispherical and are given the technical term "polyspherical."

Valves in the new engines are located diagonally across from each other rather than directly opposite as in the older hemispherical series. This permits use of a single rocker shaft in each bank (the other have two). Engineers claim that the revised combustion chambers retain the desirable breathing qualities of the hemispherical type and have the same easygoing attitude toward fuel octane numbers. In any case, the valve train is much simpler in design.

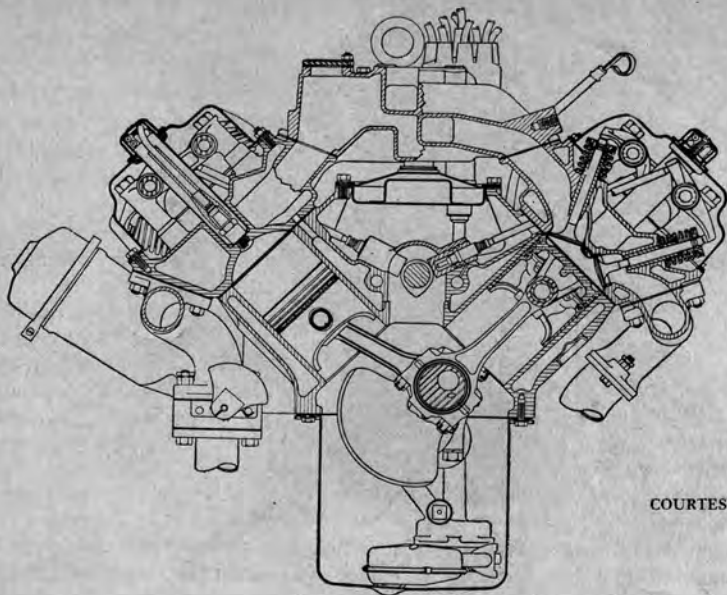
The new engine uses hydraulic lifters, and an ingenious new valve lock allows the valves to rotate freely. Sparkplugs are located outside the valve cover. Emphasis is on economy, quietness and smoothness. It's not intended as the fastest engine in its

class, but Chrysler claims full power development on regular gasoline.

Back in 1951, Chrysler introduced its present high-performance, high-compression, overhead-valve V8 for use in its New Yorker and Imperial models. It developed 180 bhp (gross) at 400 rpm with compression ratio of 7.5 to 1. In '55, this horsepower was increased to 250 at 4600 rpm in the New Yorker and Imperial models, and to 300 hp at 5200 rpm in its "300" car.

The hemispherical combustion chambers have central sparkplugs (awkward to remove) and 8.5 to 1 compression ratio. Chrysler no longer recommends regular fuel for the FirePower powerplant. The new four-barrel carburetor uses two accelerator-controlled primary throttles for ordinary driving; two secondary throttles are vacuum-controlled through a diaphragm connected to the primary venturis for high-speed driving or fast acceleration.

Chrysler's 300 engine is basically the same as its 250-hp brother, but receives additional power by the use of twin four-barrel carburetors and a different power setup on the engine. It develops its peak at



COURTESY CHRYSLER CORP.

1955 DeSoto V8 engine, 291 cu. in., 200 hp at 4400 rpm, approximate weight, 625 pounds.

5200 rpm (600 higher than stock) and breathes better through valve openings of longer duration and dual exhausts. Its punch is in the upper end.

You can buy Chrysler's overhead-valve engines in the short block version or in the complete engine assembly. The complete assembly does not include the manifold, distributor, starter, generator, carburetor, sparkplugs or coil.

Chrysler's V8s have a good reputation for fast acceleration in the passing speed range. Of course, some of this can be attributed to Chrysler's unique transmission.

DE SOTO

The overhead-valve V8 engine first used on DeSoto in 1952 is essentially a scaled-down version of the FirePower, Chrysler's big V8 which was introduced in 1951. In '52, the DeSoto Firedome engine developed 160 hp from 273 cubic inches. In its '55 version, it was beefed up to 185 bhp from 291 cubic inches. Compression ratio is a modest 7.5 to 1.

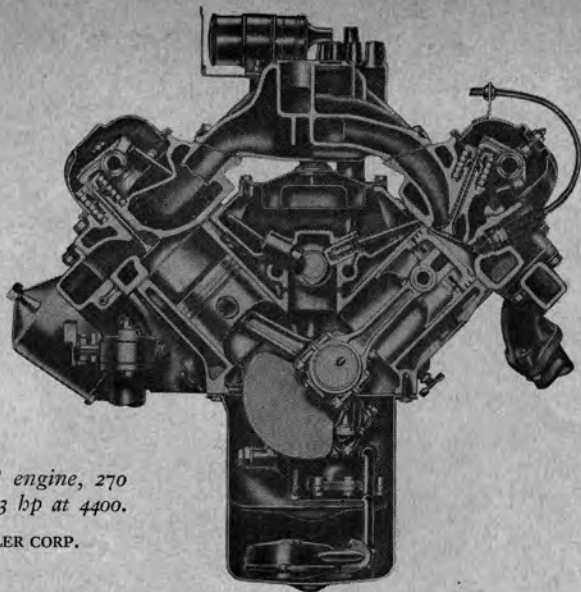
The Fireflite engine develops 15 more horsepower (total 200) and uses a four-barrel carburetor instead of the Firedome's two-barrel. Increase in power over the '54 engine is attributed to larger intake and exhaust valves, and higher lifting valves.

The Firedome puts emphasis on long life; Fireflite on hotter performance. Both are capable of operating economically on regular fuel and very seldom give carbon buildup trouble. Sparkplugs require a special tool to remove them through the valve cover from the exact center of the combustion chamber.

The short block assembly is not available from dealers, but you can buy a complete engine assembly consisting of block, heads, pan, pistons, rings, camshaft and connecting rods, but not the usual engine accessories such as the distributor, wiring, coil, sparkplugs, fuel pump, generator and starter.

DODGE

Dodge first came out with an overhead-valve V8 in 1953. Of Chrysler's popular hemispherical combustion chamber design,



1955 Dodge V8 engine, 270 cu. in. displ., 193 hp at 4400.

COURTESY CHRYSLER CORP.

it originally developed 140 hp at 4400 rpm and gave 220 pounds/feet torque at 2000 rpm. In '55, this was upped to a basic 175 and 183 hp on Dodge's cheaper models and to 193 on the Super Red Ram powerplant, which has the factory-installed options.

Special power equipment on the Super Red Ram V8 consists of a four-barrel carburetor, special manifolding and a dual exhaust system. Other specifications are the same on all three Dodge engines.

Dodge engines can operate smoothly on regular gas without carbon buildup. They're also capable of withstanding further modification to increase their power, as their

potential hasn't been reached.

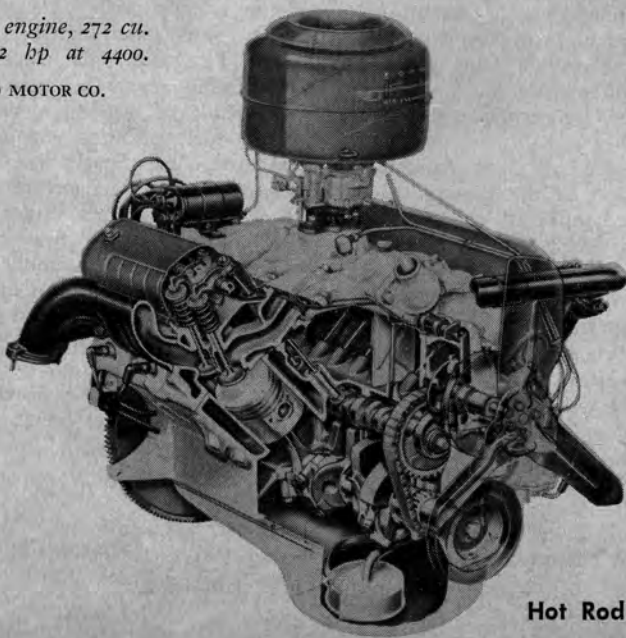
Not available in the short block assembly version at the present time, Dodge's complete engine assembly consists of the same equipment outlined for the DeSoto.

FORD

Henry's long-awaited overhead-valve V8 engine for Ford cars was announced back in 1954. It bore no relation to the L-head unit that Fords had produced (with improvements) since 1932. In '54, the ohv V8 was rated at 130 hp at 4200 rpm. The '55 version was upped to 162 hp, and you can get it equipped with a power package (8.5

1955 Ford V8 engine, 272 cu. in. displ., 162 hp at 4400.

COURTESY FORD MOTOR CO.



to 1 compression ratio, four-throat carburetor with automatic choke, dual exhausts) which increases its output to 182 hp at 4400 rpm.

Oversquare, bore is about 11 percent greater than stroke, which reduces piston travel and, therefore, friction and wear. Combustion chambers are designed for operation on regular fuel (wedge-shaped instead of Chrysler-type hemispherical). Power-package-equipped engines require use of premium gas.

Ford's Thunderbird engine is the same Interceptor version used in police cars. Actually, it's essentially a Mercury block (has same 292 cu. in. displacement) and is equipped with a four-barrel carburetor with its own inlet vacuum to actuate the secondary venturis. With standard shift, it's rated at 193 hp; automatic-transmission engines turn up 198 hp.

When you go to your dealer to buy a Ford V8 engine, you'll probably get a Mercury block. Fords with the smaller displacement cylinders are not yet available. The short block version sells for \$300 and weighs 300 pounds. Ford's complete engine assembly consists of everything except the carburetor, generator, distributor, wiring, sparkplugs, coil, starter and fan assembly.

HUDSON AND NASH

American Motors uses Packard-built overhead-valve V8s in both the Hudson Hornet V8 and the Nash Ambassador V8. These became available for the first time in 1955.

Engine is basically the same as that used in Packard's Clipper Deluxe and Super models, except American Motors' version has two less carburetor barrels and 7.8 instead of 8.5 to 1 compression ratio. Displacement is 320 cubic inches.

Neither engine is available in the short block assembly version from dealers' parts departments, although you can obtain the Packard short block from Packard dealers. The complete engine assembly does not include the accessories.

LINCOLN

Ford Motor Company announced its 90-degree, overhead-valve V8 for Lincoln back in 1952, which emphasized once again the trend towards the ohv-type of powerplant. Beginning with a horsepower in that year of 160 at 3600 rpm, it went in '55 to a jolting 225 hp.

In '55, it had a higher-lift camshaft for

faster intake valve timing, giving decreased overlap for smoother idle and low-speed running. Engine breathing is also improved through a redesigned aircleaner and a reworked, four-barrel carburetor. The intake manifold passages are larger by 10 percent. Engine has kidney-shaped section combustion chambers. These improve exhaust-valve cooling, and the manufacturer also claims that they lower fuel octane requirements in spite of a new 8.5 to 1 compression ratio on this engine.

A higher oil reservoir and a new oil-feed method which practically eliminates hydraulic tappet clicking when the engine is cold were also engineering improvements of the '55 powerplant. New type of materials for greater engine life have been used (example: intake valves are now chrome steel, and exhaust valves are cast austenitic steel).

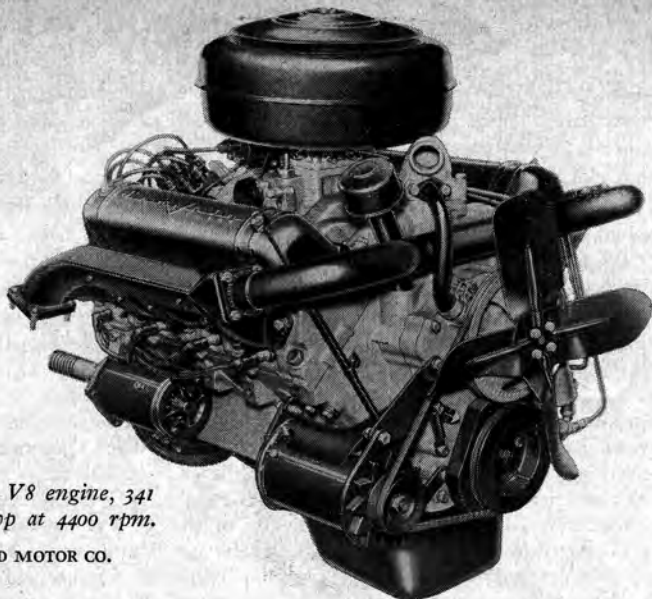
Lincoln engines are available from Detroit in only two forms: the short block version and the complete engine assembly which includes all of the engine accessories, generator, starter, fuel pump, carburetor, air-cleaner, distributor, coil and wiring.

MERCURY

An overhead-valve V8 was first used in Mercurys in 1954, the same year that Ford came out with a smaller version of the same engine for their lower-priced cars. In '54 they started with 161 hp at 4400 rpm. In '55 they upped this to 188 hp for the Custom and Monterey series, and 198 hp on the Montclair model.

Continuous basic improvement could be seen in the '55 cylinder heads, which feature an "open-wedge" combustion chamber instead of the octane-hungry "kidney" shape favored in the past. Camshaft, tappet and pushrod materials have been changed to improve "metallurgical compatibility," another way of saying that scuffing and galling of these parts will no longer be a problem. Mercury's already low engine noise level has been further reduced by reworking the aircleaner and valve covers, a redesigned timing chain, and provision of a pressure relief pocket in the oil pump. Mercurys have mechanical valve gear, same as Ford. Four-barrel carburetors are used in the Meres.

The short block assembly sells for the same price as Ford's: \$300. Complete engine assembly consists of block, heads, pan, oil pump, pistons, rings and camshaft. Other accessories, including carburetor,



1952 Lincoln V8 engine, 341 cu. in., 225 hp at 4400 rpm.

COURTESY FORD MOTOR CO.

manifold, fuel pump, generator, distributor and sparkplugs, are extra.

You can buy a rebuilt short block for \$126; this is the exchange price. From wrecking yards, it is possible to pick up a complete engine with low mileage on it for as little as \$245. The price, of course, will vary from place to place, and according to condition of the engine.

OLDSMOBILE

Usually given credit for being first of the modern V8s with its overhead-valve arrangement, Oldsmobile engines have undergone much modification since the first

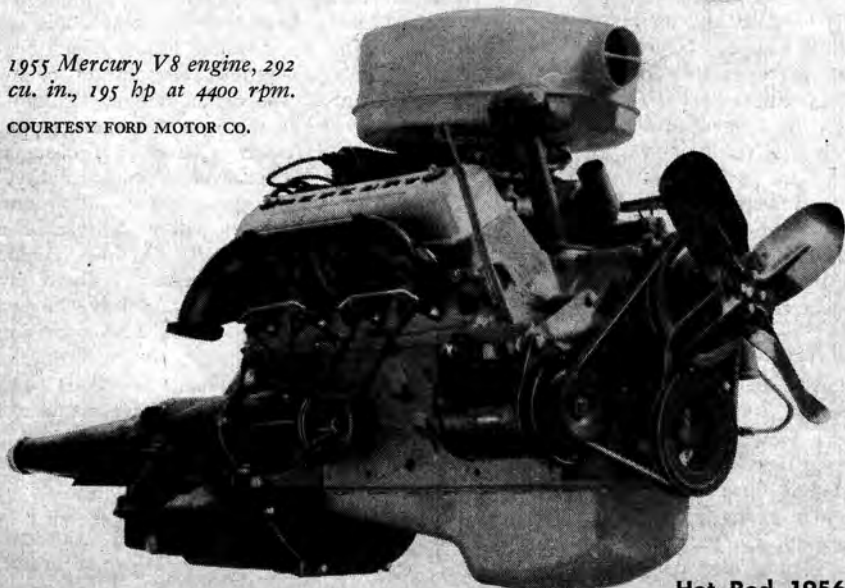
135-hp model was introduced in 1949.

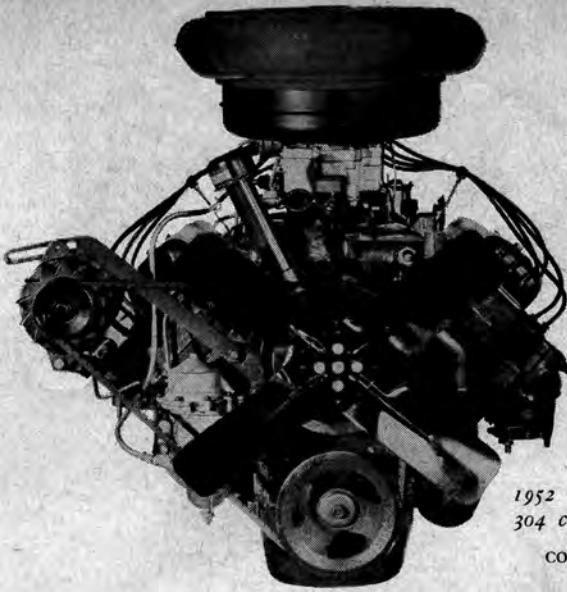
In 1955 you could buy a 185-hp powerplant or one with 202 hp; both have the same 3.88 bore and 3.44 stroke, giving a displacement of 324 cubic inches. Changes from the '54 models included higher lift camshaft, larger exhaust valves, and redesigned combustion chambers. The manufacturer recommends the use of cooler sparkplugs, and premium gas should be burned in either engine.

Oldsmobile's engine can be purchased in the short block version or in the complete assembly. The latter consists of block, heads, pan, pistons, rings, camshaft and oil pump.

1955 Mercury V8 engine, 292 cu. in., 195 hp at 4400 rpm.

COURTESY FORD MOTOR CO.





*1952 Oldsmobile V8 engine,
304 cu. in., 160 hp at 3600.*

COURTESY GENERAL MOTORS

You'll have to purchase the carburetor, sparkplugs, distributor, wiring, generator and starter separately, or use the accessories from your old engine.

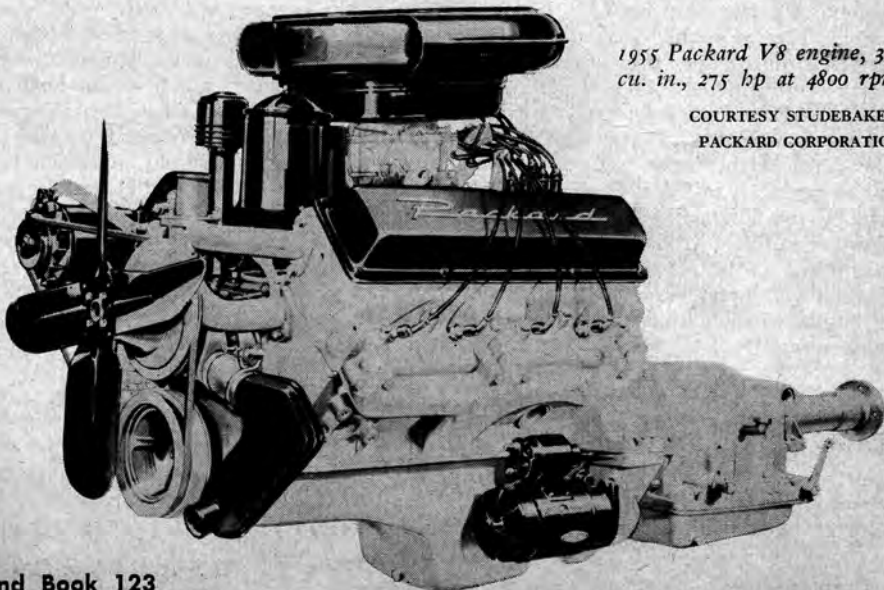
PACKARD

One of the late-comers in producing overhead-valve V8 engines for its cars, Packard finally broke the ice in 1955, and it came up with one of the top horsepower ratings in the industry with a 275-hp engine for the Caribbean model.

Actually, Packard has two basic ohv V8 engines: one has 320 cubic inch displacement; the other has 352 cubic inches. Due to dif-

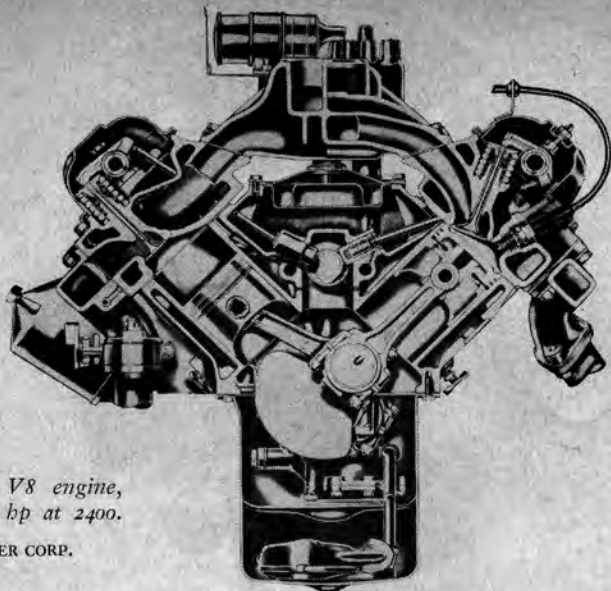
ferences in carburetion, the latter engine is rated at either 245 hp (for the Clipper Custom model), 260 hp (Patrician), or 275 hp (Caribbean). The Caribbean is equipped with twin four-barrel carburetors to give it this extra power. General design of the Packard ohv V8 is that of other V8s with a short stroke and hydraulic lifters. Packard uses a partial-flow oil filter instead of the full-flow type used in most other makes.

You can buy brand new Packard V8s from dealers in either the short block or complete assembly version, but rebuilt engines or powerplants from wrecked Packards are unobtainable at this writing.



*1955 Packard V8 engine, 352
cu. in., 275 hp at 4800 rpm.*

COURTESY STUDEBAKER-
PACKARD CORPORATION



1955 Plymouth V8 engine,
260 cu. in., 167 hp at 2400.

COURTESY CHRYSLER CORP.

PLYMOUTH

Not to be outdone by other members of the Big Three, Plymouth finally announced for its 1955 cars an overhead-valve engine available in two forms—167 and 177 hp (the latter increase is due to addition of a four-barrel carburetor).

The blocks follow the design pattern set by previous Chrysler V8s. The main differences lie in the valve train and combustion chambers. Like the Dodge Custom Royal series and all DeSotos, these are only partially hemispherical, or technically termed "polyspherical." Valves are larger in the Plymouth V8 than in its big Chrysler predecessors. They're located diagonally across from each other rather than directly opposite, permitting the use of a single rocker shaft in each bank of cylinders (the others have two). Sparkplugs are out in the open rather than in the center where they are hard to get at (as in Chrysler powerplants). Plymouth uses hydraulic valve lifters, whereas Ford and Mercury still use the mechanical type lifters.

Short block assemblies are not yet available but the complete engine is, less the usual engine accessories.

PONTIAC

Two versions of the Pontiac overhead-valve V8 were made available in 1955. The engine, unlike many other new V8s, is crammed with engineering firsts: it has a 90-degree block with the right-hand bank

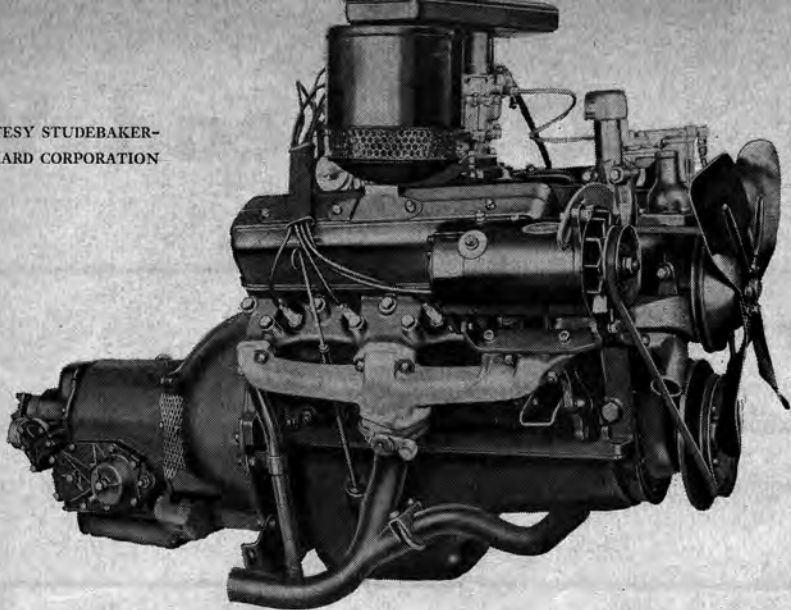
forward. This somewhat unorthodox arrangement was picked primarily to allow for better location of the distributor, fuel pump and generator. Compression ratio is 8 to 1, with an optional 7.4 to 1 for use with standard transmission. Maximum horsepower is 180 or 173, depending on compression ratio. A power-packed engine is available, with rated horsepower up to 200 at 4600 rpm peak. Pistons are aluminum and fit an oversquare 3.75 by 3.25 bore and stroke.

An interesting engineering design is the cylinder heads. They feature a completely different "ball pivot" valve train with stamped steel rocker arms that do not require the conventional shaft. Aside from a considerable reduction in the number of wear points, this design insures that the rocker arm contacts the valve-stem end squarely. The usual sidewise binding and scrubbing, which causes valve cocking and stem wear, is minimized. Tapered valve stem guides, a Pontiac first 23 years ago, are continued.

Combustion chamber design is typical General Motors, with a wedge-shaped (Ricardo) chamber containing a large quench area to control detonation and increase turbulence. The chamber is beautifully machined to eliminate minute differences in compression ratio between cylinders. This expensive feature, not found in most engines, pays dividends in smoothness of operation.

Also first are two oil filler openings, one at the forward end of each valve cover. Their primary purpose is to act as twin inlets

COURTESY STUDEBAKER-
PACKARD CORPORATION



1951 Studebaker V8 engine, 233 cu. in. displ., 120 hp at 4000 rpm, compression ratio, 7 to 1.

for the "pressure-suction" crankcase ventilation system. Fan-driven fresh air circulates continuously through the valve covers and into the crankcase, giving Pontiac engines one of the best crankcase ventilation systems in the industry.

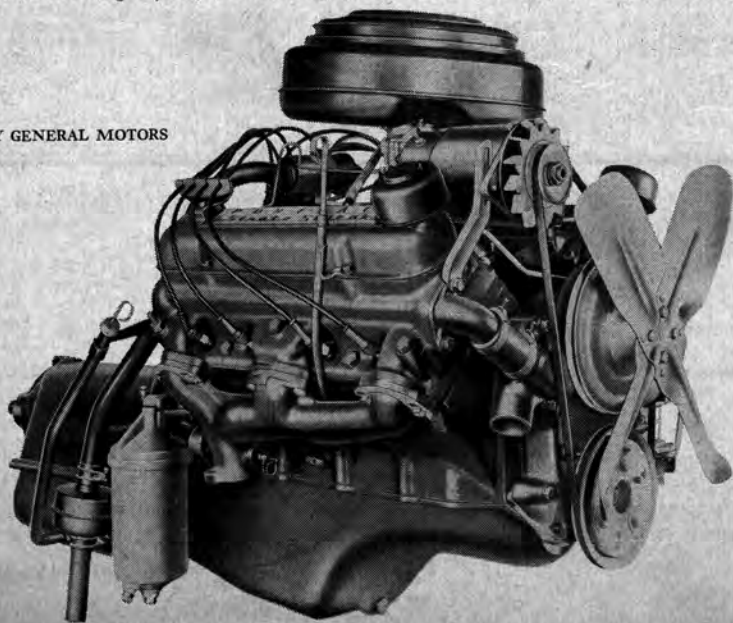
Complete engines are not available at the present writing, but you can get the short block version for \$250.

STUDEBAKER

Actually, Studebaker was one of the early manufacturers to come out with an overhead-valve V8. They made their original appearance with a 120-hp engine back in

1955 Pontiac V8 engine, 287 cu. in. displ., 180 hp at 4600 rpm, compression ratio, 8 to 1.

COURTESY GENERAL MOTORS



1952. Along with the other companies, Studebaker has continued to improve its powerplant to the present output of 162 hp at 4500 rpm in the Commander model, and 185 hp in the President series. Both engines have 259 cubic inches displacement. A four-barrel carburetor boosts power output in the President model.

Short block assembly engines are available, but the complete engine assembly is not listed in Studebaker's parts departments. Our investigation disclosed that you can buy rebuilt Studebaker V8s for \$133 (exchange price) and fairly good engines from wrecks will bring as much as \$175. ■

Overhead V8

BY JIM POTTER

ENGINE MAKE	Compression Ratio	Max. BHP @ RPM	Max. Torque @ RPM	Engine Displacement (Cubic Inches)	Bore and Stroke (Inches)
BUICK					
40 Special	8.4	188 @ 4800	256 @ 2400	264	3.63 x 3.20
60 Century, 50 Super, 70 Roadmaster	9.0	236 @ 4600	330 @ 3000	322	4.0 x 3.20

ENGINE MAKE	Compression Ratio	Max. BHP @ RPM	Max. Torque @ RPM	Engine Displacement (Cubic Inches)	Bore and Stroke (Inches)
CADILLAC					
62, 60, 75	9.1	250 @ 4600	345 @ 2800	331	3.81 x 3.63
62S Eldorado	9.1	270 @ 4800	345 @ 3200	331	3.81 x 3.63

ENGINE MAKE	Compression Ratio	Max. BHP @ RPM	Max. Torque @ RPM	Engine Displacement (Cubic Inches)	Bore and Stroke (Inches)
CHEVROLET					
V8	8.0	162 @ 4400	257 @ 2200	265	3.75 x 3.0
V8 w/Power Package	8.0	180 @ 4600	260 @ 2800	265	3.75 x 3.0

ENGINE MAKE	Compression Ratio	Max. BHP @ RPM	Max. Torque @ RPM	Engine Displacement (Cubic Inches)	Bore and Stroke (Inches)
CHRYSLER					
Windsor	8.0	188 @ 4400	275 @ 2400	301	3.63 x 3.63
New Yorker, Imperial	8.5	250 @ 4600	340 @ 2800	331	3.81 x 3.63
300	8.5	300 @ 5200	NL	331	3.81 x 3.63

ENGINE MAKE	Compression Ratio	Max. BHP @ RPM	Max. Torque @ RPM	Engine Displacement (Cubic Inches)	Bore and Stroke (Inches)
DE SOTO					
Firedome	7.5	185 @ 4400	245 @ 2800	291	3.72 x 3.34
Fireflite	7.5	200 @ 4400	247 @ 2800	291	3.72 x 3.34

ENGINE MAKE	Compression Ratio	Max. BHP @ RPM	Max. Torque @ RPM	Engine Displacement (Cubic Inches)	Bore and Stroke (Inches)
DODGE					
V8 Coronet & Royal	7.6	175 @ 4400	240 @ 2400	270	3.63 x 3.26
V8 Custom Royal	7.6	183 @ 4400	245 @ 2400	270	3.63 x 3.26
V8 w/Super Red Ram	7.6	193 @ 4400	245 @ 2800	270	3.63 x 3.26

ENGINE MAKE	Compression Ratio	Max. BHP @ RPM	Max. Torque @ RPM	Engine Displacement (Cubic Inches)	Bore and Stroke (Inches)
FORD					
V8	7.6	162 @ 4400	258 @ 2200	272	3.62 x 3.30
V8 w/Power Package	8.5	182 @ 4400	268 @ 2600	272	3.62 x 3.30
V8 Thunderbird	8.1	193 @ 4400	280 @ 2500	292	3.75 x 3.30
V8 Thunderbird w/Fordomatic	8.5	198 @ 4400	286 @ 2500	292	3.75 x 3.30

All engine prices were the latest available at press time and are offered without incurring any obligation on the part of Trend Books or the engine manufacturers. Column heading explanation follows: "New Complete"—Read story in preceding chapter on each engine as they differ widely in number of accessories included in this price. "Length"—Distance from

Prices and Sizes

Engine Weight (Dry) Approximate	Ignition Voltage	Cooling System (Quarts)	OUTSIDE DIMENSIONS OF ENGINE			OUTRIGHT PURCHASE New Short Block	PURCHASE FOB New Complete	P R I C E S Rebuilt Short Block (Exchange Only)	Junk Engine Complete to Clutch (Outright Purchase)
			Length (Inches)	Width (Inches)	Height (Inches)				
610	12	19	25½	25	33½	NA	\$505	NA	\$290-\$325
630	12	19	27	25	33½	NA	\$575	\$200-\$275	\$325-\$365

Engine Weight (Dry) Approximate	Ignition Voltage	Cooling System (Quarts)	OUTSIDE DIMENSIONS OF ENGINE			OUTRIGHT PURCHASE New Short Block	PURCHASE FOB New Complete	P R I C E S Rebuilt Short Block (Exchange Only)	Junk Engine Complete to Clutch (Outright Purchase)
			Length (Inches)	Width (Inches)	Height (Inches)				
659	12	20	28	30	34	\$240	\$680	\$200-\$275	\$365-\$450
659	12	20	28	30	34	NA	\$825	NA	NA

Engine Weight (Dry) Approximate	Ignition Voltage	Cooling System (Quarts)	OUTSIDE DIMENSIONS OF ENGINE			OUTRIGHT PURCHASE New Short Block	PURCHASE FOB New Complete	P R I C E S Rebuilt Short Block (Exchange Only)	Junk Engine Complete to Clutch (Outright Purchase)
			Length (Inches)	Width (Inches)	Height (Inches)				
461	12	16	22	24	31	\$250	\$385	NA	NA
469	12	16	22	24	31	\$250	\$399	NA	NA

Engine Weight (Dry) Approximate	Ignition Voltage	Cooling System (Quarts)	OUTSIDE DIMENSIONS OF ENGINE			OUTRIGHT PURCHASE New Short Block	PURCHASE FOB New Complete	P R I C E S Rebuilt Short Block (Exchange Only)	Junk Engine Complete to Clutch (Outright Purchase)
			Length (Inches)	Width (Inches)	Height (Inches)				
648	12	24	27	26½	31½	\$392	\$634	NA	NA
750	12	25	30	31½	32	\$394	\$638	\$200-\$250	\$345-\$395
750	12	25	30	31½	32	\$394	\$725	\$200-250	NA

Engine Weight (Dry) Approximate	Ignition Voltage	Cooling System (Quarts)	OUTSIDE DIMENSIONS OF ENGINE			OUTRIGHT PURCHASE New Short Block	PURCHASE FOB New Complete	P R I C E S Rebuilt Short Block (Exchange Only)	Junk Engine Complete to Clutch (Outright Purchase)
			Length (Inches)	Width (Inches)	Height (Inches)				
625	12	23	27	27	33	NA	\$560	\$169-\$225	\$290-\$325
625	12	23	27	27	33	NA	\$560	\$169-\$225	\$290-\$325

Engine Weight (Dry) Approximate	Ignition Voltage	Cooling System (Quarts)	OUTSIDE DIMENSIONS OF ENGINE			OUTRIGHT PURCHASE New Short Block	PURCHASE FOB New Complete	P R I C E S Rebuilt Short Block (Exchange Only)	Junk Engine Complete to Clutch (Outright Purchase)
			Length (Inches)	Width (Inches)	Height (Inches)				
495	12	19	25	26	34	NA	\$526	\$169-\$225	\$265-\$300
495	12	19	25	26	34	NA	\$526	\$169-\$225	\$265-\$300
495	12	19	25	27½	34	NA	\$526	\$169-\$225	\$290-\$325

Engine Weight (Dry) Approximate	Ignition Voltage	Cooling System (Quarts)	OUTSIDE DIMENSIONS OF ENGINE			OUTRIGHT PURCHASE New Short Block	PURCHASE FOB New Complete	P R I C E S Rebuilt Short Block (Exchange Only)	Junk Engine Complete to Clutch (Outright Purchase)
			Length (Inches)	Width (Inches)	Height (Inches)				
570	6	20	28	28	31½	\$300	\$660	\$127-\$150	\$190-\$260
570	6	20	28	28	31½	\$300	\$660	\$127-\$150	\$190-\$260
570	6	20	28	28	29	\$300	\$660	NA	NA
570	6	20	28	28	29	\$300	\$660	NA	NA

front of fan hub to rear side of bell housing attachment flange. "Width"—widest dimension of engine . . . usually from exhaust manifold to exhaust manifold. "Height"—Bottom of crankcase oil pan to top of stock air cleaner. "Outright Purchase, FOB"—Price at factory plus freight to your address. "NA"—Not available. "NL"—Not Listed.

OVERHEAD V8 PRICES AND SIZES

	ENGINE MAKE	Compression Ratio	Max. BHP @ RPM	Max. Torque @ RPM	Engine Displacement (Cubic Inches)	Bore and Stroke (Inches)
HUDSON	V8 Hornet	7.8	208 @ 4200	300 @ 2000	320	3.81 x 3.5
LINCOLN	Custom & Capri	8.5	225 @ 4400	332 @ 2500	341	3.94 x 3.5
MERCURY	Custom & Monterey	7.6	188 @ 4400	274 @ 2500	292	3.75 x 3.30
	Montclair	8.5	198 @ 4400	286 @ 2500	292	3.75 x 3.30
NASH	V8 Ambassador	7.8	208 @ 4200	300 @ 2000	320	3.81 x 3.5
OLDSMOBILE	88	8.5	185 @ 4000	320 @ 2000	324	3.88 x 3.44
	Super 88, 98	8.5	202 @ 4000	332 @ 2400	324	3.88 x 3.44
PACKARD	Clipper Super & Deluxe	8.0	225 @ 4600	325 @ 2400	320	3.81 x 3.5
	Clipper Custom	8.5	245 @ 4600	355 @ 2400	352	4.0 x 3.5
	Patrician	8.5	260 @ 4600	355 @ 2400	352	4.0 x 3.5
	Caribbean	8.5	275 @ 4800	355 @ 2400	352	4.0 x 3.5
PLYMOUTH	V8	7.6	167 @ 4400	231 @ 2400	260	3.56 x 3.25
	V8 w/Power Package	7.6	177 @ 4400	231 @ 2800	260	3.56 x 3.25
PONTIAC	Chieftain	7.4	173 @ 4400	256 @ 2400	287	3.75 x 3.25
	Star Chief	8.0	180 @ 4600	264 @ 2400	287	3.75 x 3.25
	w/Power Package	8.0	200 @ 4600	278 @ 2800	287	3.75 x 3.25
STUDEBAKER	Commander	7.5	162 @ 4500	250 @ 2800	259	3.56 x 3.25
	President	7.5	185 @ 4500	258 @ 2800	259	3.56 x 3.25

All engine prices were the latest available at press time and are offered without incurring any obligation on the part of *Wend Books* or the engine manufacturers. Column heading explanation follows: "New Complete"—Read story in preceding chapter on each engine as they differ widely in number of accessories included in this price. "Length"—Distance from

OVERHEAD V8 PRICES AND SIZES

Engine Weight (Dry) Approximate	Ignition Voltage	Cooling System (Quarts)	OUTSIDE DIMENSIONS OF ENGINE			OUTRIGHT PURCHASE New Short Block	PURCHASE FOB New Complete	P R I C E S Rebuilt Short Block (Exchange Only)	Junk Engine Complete to Clutch (Outright Purchase)
			Length (Inches)	Width (Inches)	Height (Inches)				
NA	12	21	33	24	34	NA	\$575	NA	NA

Engine Weight (Dry) Approximate	Ignition Voltage	Cooling System (Quarts)	OUTSIDE DIMENSIONS OF ENGINE			OUTRIGHT PURCHASE New Short Block	PURCHASE FOB New Complete	P R I C E S Rebuilt Short Block (Exchange Only)	Junk Engine Complete to Clutch (Outright Purchase)
			Length (Inches)	Width (Inches)	Height (Inches)				
760	12	22½	26	27	31	\$395	\$851	\$200-\$275	\$325-\$365

Engine Weight (Dry) Approximate	Ignition Voltage	Cooling System (Quarts)	OUTSIDE DIMENSIONS OF ENGINE			OUTRIGHT PURCHASE New Short Block	PURCHASE FOB New Complete	P R I C E S Rebuilt Short Block (Exchange Only)	Junk Engine Complete to Clutch (Outright Purchase)
			Length (Inches)	Width (Inches)	Height (Inches)				
640	12	19	26	26½	31	\$300	\$660	\$127-\$150	\$190-\$260
640	12	19	26	26½	31	\$300	\$660	\$127-\$150	\$190-\$260

Engine Weight (Dry) Approximate	Ignition Voltage	Cooling System (Quarts)	OUTSIDE DIMENSIONS OF ENGINE			OUTRIGHT PURCHASE New Short Block	PURCHASE FOB New Complete	P R I C E S Rebuilt Short Block (Exchange Only)	Junk Engine Complete to Clutch (Outright Purchase)
			Length (Inches)	Width (Inches)	Height (Inches)				
NA	12	26	33	24	34	NA	\$575	NA	NA

Engine Weight (Dry) Approximate	Ignition Voltage	Cooling System (Quarts)	OUTSIDE DIMENSIONS OF ENGINE			OUTRIGHT PURCHASE New Short Block	PURCHASE FOB New Complete	P R I C E S Rebuilt Short Block (Exchange Only)	Junk Engine Complete to Clutch (Outright Purchase)
			Length (Inches)	Width (Inches)	Height (Inches)				
700	12	20½	33	31¼	29	\$250	\$545	\$149-\$175	\$290-\$345
700	12	20½	33	31¼	29	\$250	\$570	\$149-\$175	\$290-\$345

Engine Weight (Dry) Approximate	Ignition Voltage	Cooling System (Quarts)	OUTSIDE DIMENSIONS OF ENGINE			OUTRIGHT PURCHASE New Short Block	PURCHASE FOB New Complete	P R I C E S Rebuilt Short Block (Exchange Only)	Junk Engine Complete to Clutch (Outright Purchase)
			Length (Inches)	Width (Inches)	Height (Inches)				
NA	12	24	33	24	34	\$242	\$615	NA	NA
NA	12	24	33	24	34	\$253	\$615	NA	NA
NA	12	24	33	24	34	\$253	\$615	NA	NA
NA	12	24	33	24	34	\$253	\$615	NA	NA

Engine Weight (Dry) Approximate	Ignition Voltage	Cooling System (Quarts)	OUTSIDE DIMENSIONS OF ENGINE			OUTRIGHT PURCHASE New Short Block	PURCHASE FOB New Complete	P R I C E S Rebuilt Short Block (Exchange Only)	Junk Engine Complete to Clutch (Outright Purchase)
			Length (Inches)	Width (Inches)	Height (Inches)				
NA	12	13	25	24	34	NA	\$510	NA	NA
NA	12	13	25	24	34	NA	\$510	NA	NA

Engine Weight (Dry) Approximate	Ignition Voltage	Cooling System (Quarts)	OUTSIDE DIMENSIONS OF ENGINE			OUTRIGHT PURCHASE New Short Block	PURCHASE FOB New Complete	P R I C E S Rebuilt Short Block (Exchange Only)	Junk Engine Complete to Clutch (Outright Purchase)
			Length (Inches)	Width (Inches)	Height (Inches)				
NA	12	24	27	26½	33	\$250	NA	NA	NA
NA	12	24	27	26½	33	\$250	NA	NA	NA
NA	12	24	27	26½	33	\$250	NA	NA	NA

Engine Weight (Dry) Approximate	Ignition Voltage	Cooling System (Quarts)	OUTSIDE DIMENSIONS OF ENGINE			OUTRIGHT PURCHASE New Short Block	PURCHASE FOB New Complete	P R I C E S Rebuilt Short Block (Exchange Only)	Junk Engine Complete to Clutch (Outright Purchase)
			Length (Inches)	Width (Inches)	Height (Inches)				
685	6	17	26	24	28	\$289	NA	\$133-\$175	\$225-\$275
685	6	17	26	24	28	\$289	NA	\$133-\$175	\$225-\$275

front of fan hub to rear side of bell housing attachment flange. "Width"—Widest dimension of engine ... usually from exhaust manifold to exhaust manifold. "Height"—Bottom of crankcase oil pan to top of stock air cleaner. "Outright Purchase, FOB"—Price at factory plus freight to your address. "NA"—Not available. "NL"—Not Listed.