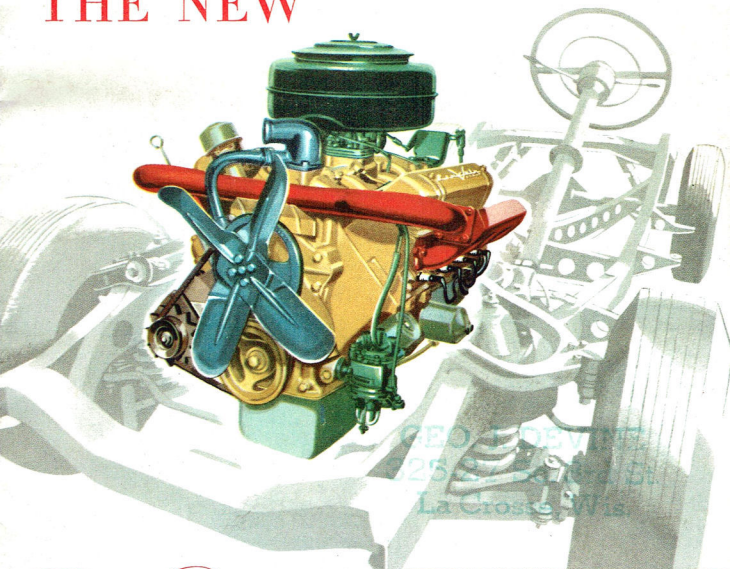


THE NEW



GEO. I. DEWITT
225 S. 2nd St.
La Crosse, Wis.

Lincoln

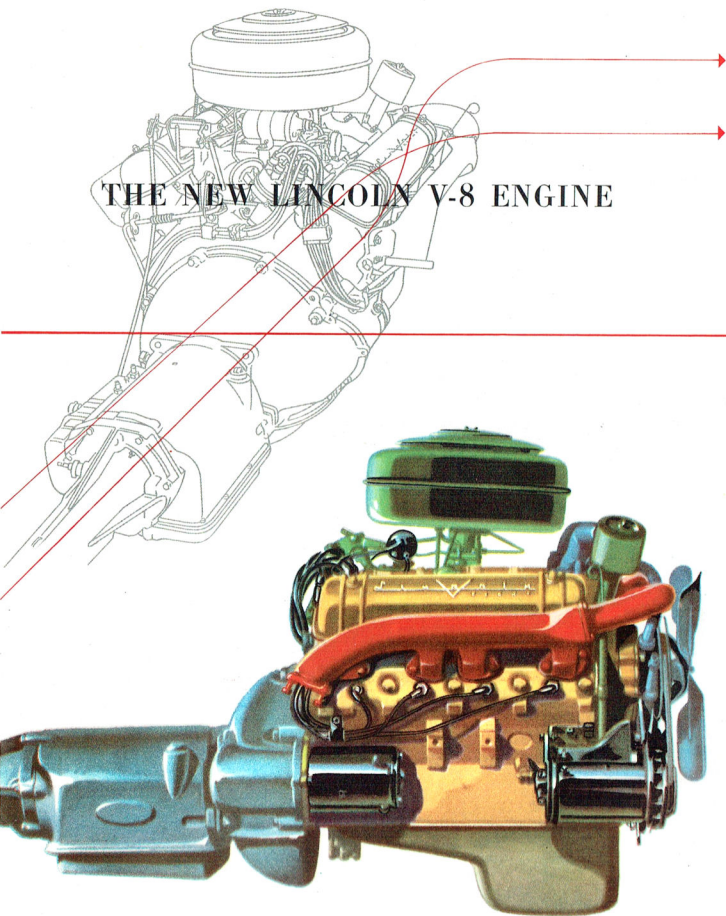
V-EIGHT

HIGH-COMPRESSION

160-hp ENGINE

PRECISION ENGINEERED FOR PRECISION ACTION

THE NEW LINCOLN V-8 ENGINE



For 1952, Lincoln proudly presents an entirely new, overhead valve V-8 engine of advanced design—with more power than you may ever need.

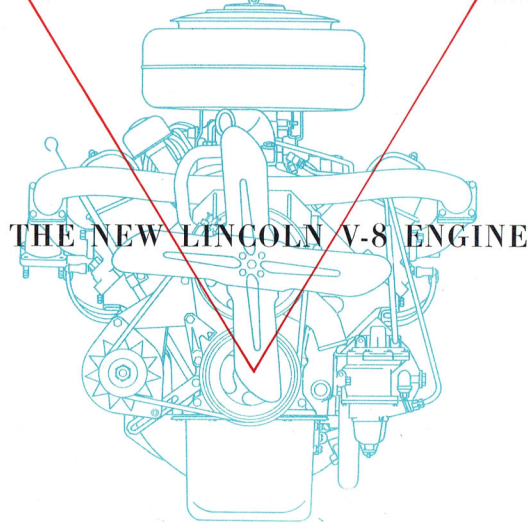
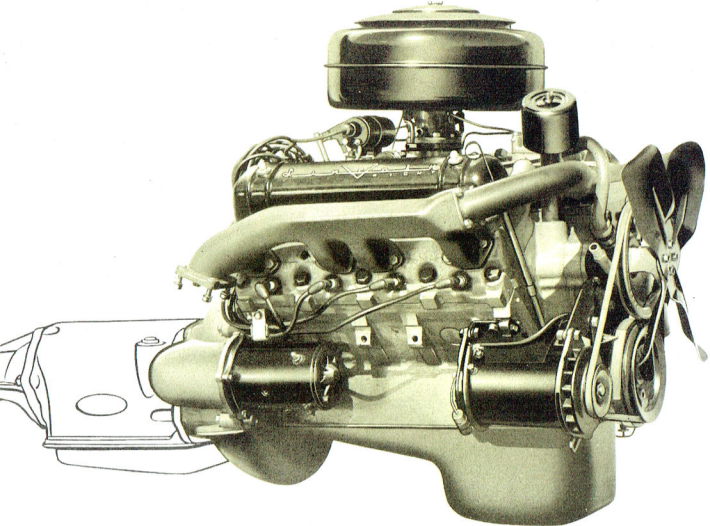
Precision engineered to the newest and latest concepts of high-compression design, this new Lincoln V-8 engine represents the premium product of the Ford Motor Company—producer of more V-type engines than all other manufacturers combined. It is assuredly a worthy successor to the previous Lincoln V-type engine, which has firmly established itself as one of the best performing power plants in the motoring world.

Many advanced engineering features make this new Lincoln engine the indisputable performance leader for 1952. Among these is a new "Hi-Swirl" combustion chamber which assures thorough mixing of the fuel-air mixture to give more complete, even burning. This permits an increase in the compression ratio for extra gains in smoothness and economy.

The crankshaft of the new Lincoln V-8 engine is of a new "Nodular" cast iron, an exclusive Ford process that assures high precision of manufacturing. The crankshaft has five main bearings which are supported by an extra-deep and heavily reinforced crankcase. This crankcase actually extends below the axis of the crankshaft—another exclusive Lincoln feature, and one which contributes materially to the high degree of smoothness and quietness of operation of this great new Lincoln engine.

Other outstanding features include the new, rotating-type overhead valves with integral guides; the new, dual-downdraft carburetor with integral-mounted air cleaner; the new "Free-Flow" manifold; the new "Micro-Screen" full-flow oil filter; and many others. All of these engineering advancements contribute to greatly improved mechanical and thermal efficiency for increased power output, better economy, and smoother, quieter operation.

The product of years of intensive research and testing, this new Lincoln V-8 engine will give precision operation that far exceeds even the most stringent motoring requirements. In effect, it establishes a new standard for automotive power plants throughout the world.



CULMINATION OF 30

YEARS OF PROGRESS IN

V-TYPE ENGINES

The 30-year history of the Lincoln Division of Ford Motor Company is a record of continuous progress and advancement in the development of newer and better V-type engines. During this period, Lincoln has introduced to the motoring public scores of engineering improvements in power plant design—produced literally hundreds of thousands of V-type engines—and has gained priceless experience in the design and manufacture of this kind of engine. *In its entire history, Lincoln has never built other than a V-type power plant.*

This year, with the introduction of a new overhead valve V-8, Lincoln reaches new heights of leadership in V-type engine design. The culmination of 30 years of progress in V-type engines, this remarkable, new Lincoln engine represents the newest, latest, and most advanced concepts of modern, high-compression, V-type power plant engineering. Now, these have been brought to their highest peak of development by the world's foremost producer and designer of V-type engines—thus giving American motorists new and higher standards of driving smoothness, performance, economy, and durability.

LINCOLN ENGINE OFFERS MORE IN EVERY WAY

the "right" power

The Lincoln engine's 160-hp gives the ideal power-weight ratio for Lincoln cars—the perfect combination for best all-round performance and economy.

precision performance

This newer, more efficient, higher compression-ratio V-8 design gives smoother, quicker acceleration—more responsive performance—and better economy.

smoother, quieter operation

Every component of the Lincoln V-8 engine—from the five-bearing, completely counterbalanced crankshaft to the silent overhead valves—is designed to give smoother, quieter operation.

better fuel economy

A higher compression ratio means greater operating efficiency. The new Lincoln V-8 engine with a compression ratio of 7.5 to 1 is able to squeeze more miles out of every drop of gasoline.

lower maintenance costs

Simpler in design, more compact in construction, the Lincoln engine requires less service attention, with resultant savings in maintenance costs.

longer life design

The new Lincoln V-8 engine's extra-deep, reinforced crankcase and sturdy 'Nodular'-type cast iron crankshaft provide longer life and greater durability.

THE NEW LINCOLN V-8 ENGINE

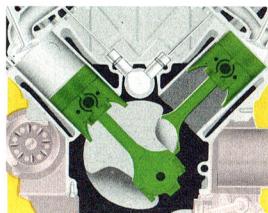
AN ADVANCED V-8 DESIGN THAT'S BASICALLY BETTER

The new Lincoln V-8 engine is an entirely new, overhead valve V-type power plant of better basic design. Smaller in size and lighter in weight than previous V-type engines, it nevertheless develops higher horsepower, is more economical to operate, and is smoother and quieter in operation. Its advanced V-type design can take full advantage of higher octane fuels as they become available.



"hi-swirl" combustion chamber

The exclusive Lincoln "Hi-Swirl" combustion chamber provides greater turbulence of the fuel-air mixture for more efficient burning. It also permits the use of a higher compression ratio—giving extra gains in smoothness and economy.

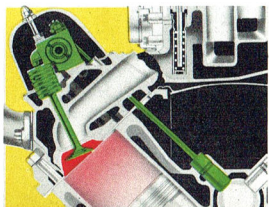


shorter piston stroke

The short-stroke, large-bore design principle of the new Lincoln engine results in slower piston speed, which means less vibration and less friction. Also, since there is less cylinder wall area exposed, heat losses are appreciably reduced.

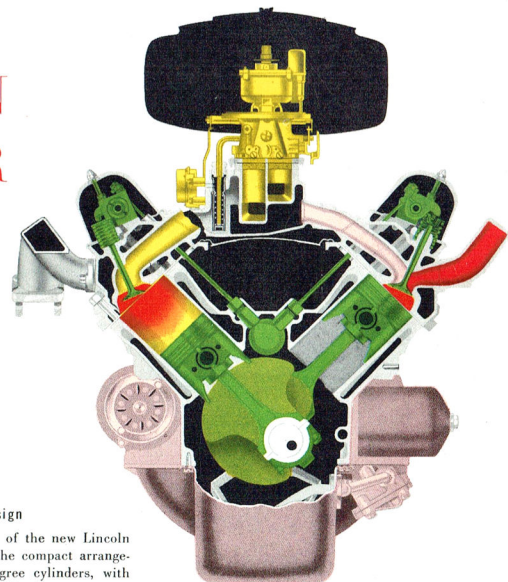
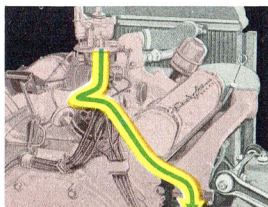
efficient overhead valve design

Simple overhead valve arrangement contributes to smooth, reliable engine performance by assuring free, unrestricted passage of fuel-air mixture and exhaust gases. Hydraulic valve lifters assure quiet, efficient valve operation at all speeds.



"free-flow" manifolding

Highly efficient "Free-Flow" manifolding system of Lincoln engine has large-diameter, equal-length passages for uniform distribution of fuel-air mixture to cylinders, and direct-passage exhaust manifolding for quick, efficient removal of exhaust gases.



more compact design

This sectional view of the new Lincoln V-8 engine shows the compact arrangement of the 90-degree cylinders, with short piston stroke, simple arrangement of overhead valves, compact combustion chamber, and extra-deep, reinforced crankcase. This design provides a shorter over-all length, which means more room inside the car for passengers, and a shorter hood for better visibility.

FOUR BASIC REASONS WHY LINCOLN V-8 ENGINE IS BETTER

better breathing

The Lincoln V-8 engine is better in breathing capacity because of its new dual-downdraft carburetor, "Free-Flow" manifolding, extra-large valve ports, and "Hi-Swirl" combustion chamber.

better burning

"Hi-Swirl" combustion chamber assures thorough mixing of the fuel-air mixture, and more complete, even burning—which means that larger percentage of heat is converted into useful power.

better cooling

Full-length water jackets encircle each cylinder to provide accurate temperature control. Direct-passage exhaust manifolding removes hot gases quickly. Less heat is thus lost to the cooling system.

better mechanical efficiency

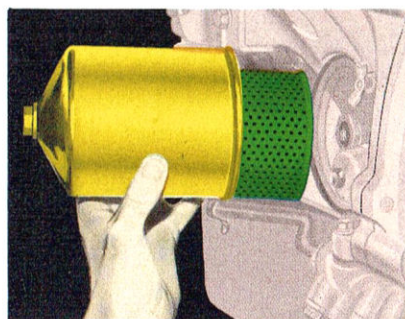
The new Lincoln V-8 engine has better mechanical efficiency because friction is less. This is due to shorter piston stroke, which reduces piston speed and, thus, sliding friction in the cylinder.

THESE ADDITIONAL FEATURES

make the most of

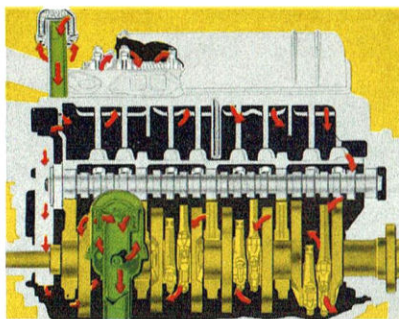
LINCOLN'S BETTER BASIC DESIGN

In addition to its advanced, overhead valve, high-compression design, the new Lincoln V-8 engine offers many other remarkable engineering advancements. Some of those are pictured below. A more complete list, however, would also include such features as: an automatic by-pass thermostat, a new-



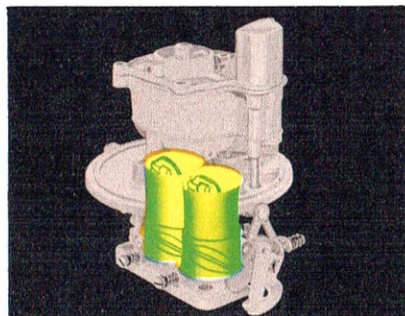
"micro-screen" oil filter

New Lincoln "Micro-Screen" oil filter is of the full-flow type, with automatic by-pass valve. It filters *all* of the oil going into the engine, removing harmful abrasive material which might damage vital engine parts.



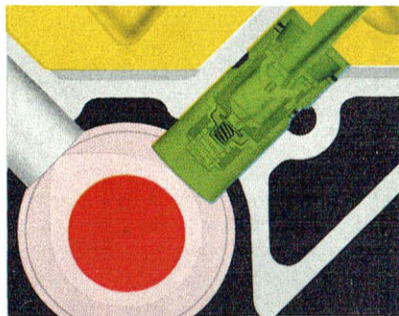
positive crankcase ventilation

Highly efficient ventilation system takes in outside air through filler pipe, and circulates it through both valve chamber and crankcase. Picks up harmful "blow-by" gases and exhausts them through road tube.



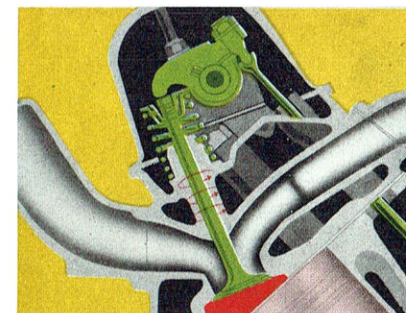
dual-downdraft carburetor

Lincoln carburetor is of the dual-down-draft, concentric-bowl type which gives precise fuel metering under all driving conditions. The oil-bath air cleaner mounts directly over and around the carburetor.



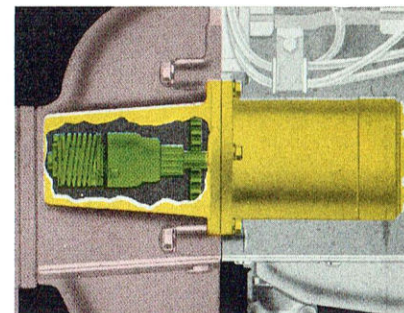
hydraulic valve lifters

Automatic adjustment of valve clearance is provided by hydraulic valve lifters. They maintain clearance throughout valve linkage at absolute zero—insuring quiet valve action and efficient engine operation.



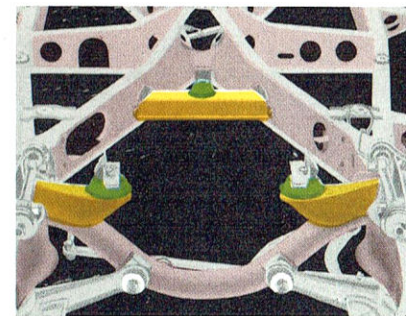
rotating-type valves with integral guides

Special spring retainers permit valves to rotate when in operation—giving smoother, quieter engine operation and longer valve life. Guides are cast integral with cylinder head. This keeps valves 100-degrees cooler.



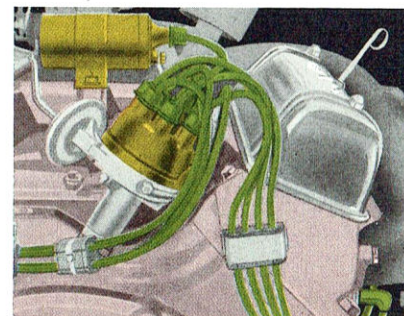
ratchet-type starter

Unique ratchet device in starter keeps starter drive gear engaged until the engine speed reaches approximately 300 rpm—giving quicker, easier starting with less wear and tear on the starter motor.



"center-poise" engine mounts

Lincoln engine is carried in balance on three rubber-insulated supports—two in front at the center of gravity of the engine, and one at the rear. This mounting provides effective cushioning of engine vibration.



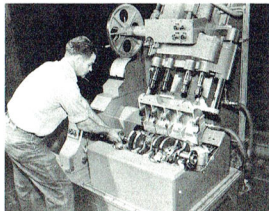
weatherproofed ignition

All vital parts of the Lincoln engine's ignition system—spark plugs, high-tension wiring, connections to coil and distributor—are protected against moisture and wet weather by special neoprene coverings.

type automatic choke, pressure lubrication, chain-driven timing gear, high-lift camshaft, integral valve guides, chrome-plated top piston ring—all of which combine to make this new Lincoln power plant the smoothest, quietest, most economical, and best performing automobile engine in its field.

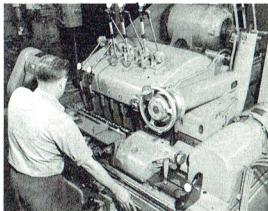
PRECISION MANUFACTURING MEANS PRECISION POWER

The manufacture of the Lincoln V-8 engine is a carefully controlled precision process that assures top-quality construction and workmanship from beginning to end. An outstanding example of this is the dynamic balancing of individual components of the engine, and the mass-balancing of the engine as a whole. This is another of the many reasons why the Lincoln engine gives such smooth, quiet operation and outstanding performance under all driving conditions.



crankshaft balancing

In this crankshaft balancing machine, the crankshaft is first suspended on knife blades for static balancing, then rotated at high speeds for dynamic balancing. Precision indicators reveal any unbalance.

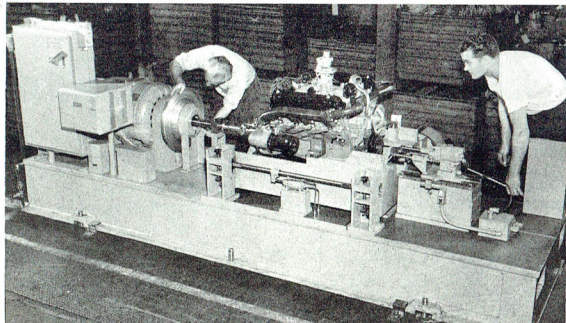


camshaft balancing

Extreme accuracy in the camshaft is of vital importance to Lincoln standard of highest quality. Operator checks exact curvature of each cam on optical dividing head to accuracy of millionth of an inch.

At the end of the assembly line, new Lincoln V-8 engines are cradled in a mass balancing machine and driven at speeds up to 1600 rpm. Unique optical indicator reveals any lingering unbalance—shows operators where to drill out tiny bits of metal to correct slightest vibration.

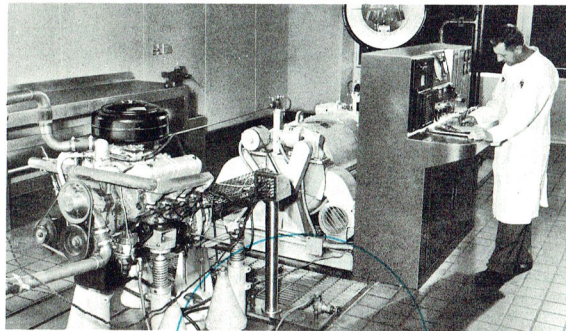
engine balancing



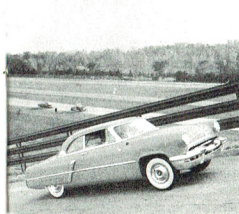
million-mile

TEST TRACK

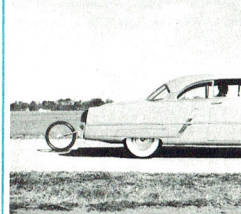
The new Lincoln V-8 engine has undergone one of the most extensive testing programs ever conducted on an automobile power plant. It has been laboratory tested on engine dynamometers for more than 10,000 hours, and road tested on cross-country highways for many thousands of miles. This is the equivalent of more than one million miles of hard, test-track driving—giving positive assurance that the new Lincoln V-8 engine is completely tried and proved.



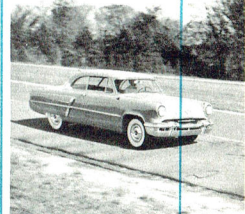
grueling road tests



Extensive mountain climbing tests were conducted to test and prove the new Lincoln engine's stamina and pulling power.



Fuel economy was checked under actual driving conditions by means of a highly accurate "fifth wheel," and special fuel-measuring gages.



The new 1952 Lincoln engine was thoroughly tested on highways—driven at terrific speeds under extreme climatic conditions.

facts and **FIGURES**

OF THE **NEW** LINCOLN V-8 ENGINE

The 1952 Lincoln engine is an overhead valve, advanced-design, 90° V-8, developing 160-horsepower at 3900 rpm and 284 ft-lb torque at 1800 rpm. Bore, 3.8 in.; stroke 3.5 in. Displacement, 317.5 cu in. Compression ratio, 7.5 to 1. Counterbalanced crankshaft of Nodular-type cast iron with five selectively-fitted main bearings of replaceable, micro-babbitt precision type. Slipper-type aluminum-alloy pistons with steel-strut inserts for controlled expansion. Chain-driven camshaft. Two compression rings, and one oil ring. Top ring chrome-plated for long life. Rotating-type valves with integral guides and self-adjusting hydraulic valve lifters.

Pressure lubrication to valve-lifters and all main, connecting rod and camshaft bearings. Gear-type oil pump. "Micro-Screen" full-flow oil filter. Positive crankcase ventilation. Oil capacity, 5 quarts (refill).

Single, high-capacity water pump, permanently lubricated. Full-length water jacket cylinders for efficient cooling and better oil economy. Automatic by-pass thermostat for quick warm-up. Lo-speed, 4-bladed silent fan. Controlled-pressure radiator. Coolant capacity, 24.5 quarts.

Dual-downdraft, concentric-bowl carburetor of simplified design. Integral oil-bath air cleaner. Automatic idling control. Automatic choke with manifold-mounted heat control. "Free-Flow" manifolding.

High-capacity, lightweight 63-plate, 110-ampere-hour battery. High-capacity generator with automatic current and voltage control. Ratchet-type starter with 16.8 to 1 cranking ratio. High-speed, single breaker-arm distributor with full-pressure type automatic spark control.

These specifications were in effect at the time this manual was approved for printing. Lincoln Division of Ford Motor Company, Detroit, Michigan, whose policy is one of continuous improvement, reserves the right, however, to discontinue or change at any time, specifications, design or prices without notice and without incurring any obligation.

rating

lubrication

cooling

fuel system

electrical

LINCOLN DIVISION • FORD MOTOR COMPANY