



Details of
ESSEX SIX CONSTRUCTION

How Essex Six Quality Is Kept High

THE Essex Six, built by Hudson under Hudson patents, yields a remarkably high degree of all-around economy and pleasing operation because an exacting system of inspection holds quality to a uniformly high standard. Illustrations on this page picture a few steps in this program. In many vital units the Essex has as fine workmanship as any car whatsoever, because human ingenuity has not discovered any method by which a better standard of work can be accomplished.

Piston pins and main crankshaft bearings for example, are held to an accuracy of $\frac{1}{4}$ of $\frac{1}{10000}$ th of an inch. To comprehend such precision, imagine for yourself a quarter-inch divided into 1,000 equal parts. Or, the same thing, imagine a hair split into 10 equal fractions, or a cigarette paper's thickness divided four times. Such watch-like standards are manifestly impossible with human senses. Yet these standards are maintained month after month as a part of the regular day's work in manufacturing Essex automobiles by the thousand. The result is obtained because the Hudson plant—in which Essex is built—utilizes in its inspection system the latest

Modern Scientific Inspection Instruments Assure Great Accuracy

and most sensitive instruments known to the scientific-industrial world—devices which detect the most minute inaccuracies. In hundreds of parts an error of one-thousandth means rejection. Workmen are paid only for results which meet these inspection requirements.

Essex has been designed so that these many inspections do not necessitate immoderate costs. Modern automatic machinery is used which can work to this high standard of accuracy, and moreover can continue to do it indefinitely with no errors of fatigue or miscalculation.

The object of this great care is to assure parts which fit so precisely that they may move or revolve on each other with no appreciable friction. This not only conserves power, but makes for long wear, and brings about the smooth running satisfaction which all Essex owners know so well.

Thus a combination of careful design, which takes advantage of the best modern facilities, and a full equipment of scientific inspection instruments works out to give Essex owners a car of remarkable quality at a most unusually favorable price.

A unit of the rear axle under inspection for roundness and exact size. One of many tests for quality.

Left—Testing the tension of a piston ring. Right—Each Essex piston is Brinnell-tested for hardness. Below—Assuring the quiet action of the differential by a test in the "silence room."

Camshaft surfaces are checked to exceptionally close accuracy.

Each connecting rod is tested for an exact, equal weight.

Left-hand illustration shows valve springs being tested for right tension. Right-hand illustration shows check of cylinders for roundness and exact uniform size.

Springs are inspected for just the right riding qualities.

The Essex crankshaft is balanced so exactly and delicately that vibration is practically eliminated—a prime reason for the quiet, smooth operation of the car.

Right—Pistons are held to uniform weight and close sizes.

Above—All valves must be of exact dimensions. Right—Piston pins are held to exact roundness and size.



THE Essex Six is built by the Hudson Motor Car Co., under the famous and exclusive Hudson Super-Six patents, in the same plant and by the same workmen as the Hudson Super-Six. It embodies the principles of design and building which the Hudson organization has learned in more than 15 years of successful manufacture.

In its operation, the Essex yields a comfort and ease of riding previously unknown in its price field. To economy and reliability it adds easy control, smoothness and quick pick-up.

In the Hudson-Essex plant 90 per cent of the individual parts which make up a motor car are machined and finished. Thus Hudson-Essex engineering ideas are wrought into completed cars under a single supervision, with Hudson-Essex quality the standard of achievement all the way through.

The Essex provides useful and pleasing service in every essential. The value which it offers must appeal to the motorist who wishes to obtain genuine economy and is determined not to compromise on satisfactory service.

Brief Detailed Information on the New Essex

MOTOR—6-cylinder— $2\frac{1}{8} \times 4\frac{1}{4}$. Tax horsepower, 17.3. Block casting integral with crankcase. L-head type. Super-Six design crank-shaft, with three main bearings. Split aluminum pistons. Camshaft and accessories driven by adjustable silent chain. Roller tappets. Four-point suspension. Thermo-syphon cooling with hand controlled shutters on radiator.

Lubrication by circulating splash with geared-down plunger pump. American Bosch electrical system. Bendix starter pinion. Full automatic spark advance. Constant velocity self-regulating carburetor. Steel flywheel.

CLUTCH—Multiple disc clutch—cork inserts, running in oil.

TRANSMISSION—Unit with engine. 3-speed and reverse, aluminum

case. Hyatt bearings on main shaft. Neutral lock. Spicer universal joints and tubular propeller shaft.

REAR AXLE—Semi-floating, Timken bearings throughout, fully adjustable, $14\frac{1}{2} \times 1\frac{3}{4}$ brakes.

WHEELS—Wood. Genuine balloon tires. Spare rim and carrier at rear of car. **WHEEL BASE**—110½ inches.

STEERING—Worm and full worm wheel—17 inches, with wood wheel with aluminum spider.

GASOLINE TANK—Located at rear of car. Vacuum feed.

CHASSIS LUBRICATION—Hudson patented oilers.

BODIES—5-Passenger Touring. 5-Passenger Coach.

NOTE—The Hudson Motor Car Company reserves the right to make changes or improvements at any time without incurring any obligation to install same on any cars previously sold

