

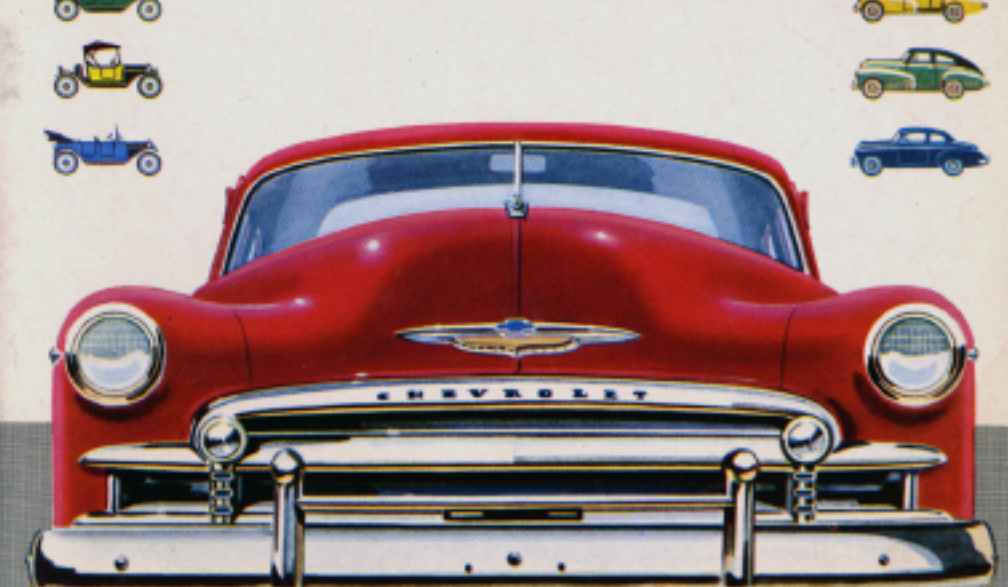


THE
CHEVROLET
STORY




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The Chevrolet Story



1912

THE STORY of Chevrolet provides an outstanding example of what can be accomplished by an organization which, keeping the public's approval constantly in mind, designs, manufactures and distributes a good product which it strives continually to make a better one.

It is a story that is distinctly American, for it begins in a little experimental shop in Detroit and continues with a record of steady expansion until the company entered World War II with nine manufacturing centers and eleven assembly plants located in ten different states, converted them all to war production—and embarked upon postwar production with two new assembly plants designed and under construction, with expansions planned for many of its manufacturing plants.

Such growth can surely be accepted as definite proof of the public's approval. In 1912, the first year of its manufacturing existence, Chevrolet produced 2,999 vehicles, the car being a five-passenger touring car that listed at \$2,150 at the factory. It took twelve years to produce the first million vehicles, but thereafter the demand increased to such an extent that production was soon averaging more than a million units a year.



1950



The first Chevrolet-owned plant, at Flint

In the beginning, however, no one could have foreseen that Chevrolet would have such a phenomenal growth. In 1909, as a matter of fact, when William C. Durant, a successful buggy manufacturer of Flint, Michigan, asked Louis Chevrolet, a well-known race driver, to design a car for introduction to the public, he had not yet formed a company to manufacture it. Two years of experimental work in a small Detroit shop followed before the Chevrolet Motor Company of Michigan was organized November 3, 1911, and then a plant was leased in Detroit and production was started on cars which were introduced to the public the following year.

The prompt public acceptance of the new vehicle made necessary an almost immediate expansion of the company's production facilities. It was necessary also to expand the distribution facilities and, during the next seven years, Chevrolet developed the closely coordinated system of production and distribution upon which its success has so largely rested.

The first expansion was made in 1913, when the home plant at Flint, Michigan, was established and an assembly plant was leased in New York City. Then in 1914 the "Baby Grand" touring car and the "Royal Mail" roadster were introduced, and once again the public demand exceeded the company's ability to produce.



1914: the "Baby Grand"

The year 1914 marked the beginning of the far-flung wholesale selling organization which today covers the United States, with zone offices located in 37 principal cities.



The first selling organization was created that year in Oakland, California, and was followed in 1915 by similar offices in Kansas City, Missouri, and Atlanta, Georgia. 1915 also saw the establishment of additional production facilities at St. Louis, Missouri, and Oshawa, Ontario, Canada. The famous "490" model was introduced in 1916, and its production was begun in a plant purchased from the Maxwell Motor Company at Tarrytown, N.Y.

Further expansion came in 1916. A new assembly plant was erected in Flint and others were begun at Fort Worth, Texas, and Oakland, Calif. Manufacturing facilities were increased by the purchase of a plant in Bay City, Michigan, for the production of small parts and the acquisition of the Warner Gear Company at Toledo, Ohio, for the manufacture of gears and transmissions. A new axle plant was added at Flint, retail stores were opened in many of the larger cities, principally in the East—and production that year exceeded 70,000 units, a decided increase over the 1912 production of only 2,999.



1916: the "490"

In 1918 Chevrolet became a part of General Motors Corporation and embarked upon another era of expansion. A new assembly plant was started in St. Louis and a new high of nearly 150,000 units were produced



The General Motors Building

that year. In April 1921 the executive offices of the company were moved from New York to the General Motors Building in Detroit; and in March 1922 a new impetus was given to Chevrolet's rising fortunes by the appointment of William S. Knudsen as vice-president in charge of operations.

During Mr. Knudsen's first year in office Chevrolet took over from General Motors the former Central Products group, made up of the gear, axle and forge plants located in Detroit. The Janesville, Wisconsin, plant of the Samson Tractor Company was also acquired and converted into another assembly plant.

Two other important steps in the orderly process of expansion were the purchase of land and the beginning of assembly plant construction at Buffalo, N. Y., and Norwood, Ohio, a suburb of Cincinnati. With the introduction of the "Superior" models, Chevrolet production meanwhile achieved new heights, production for 1922 being just a little less than one-quarter of a million units.

Assembly of vehicles was started the following year at Janesville, Buffalo and Norwood, and a total of 480,737 units was built. A sheet metal plant was completed at Flint and placed in operation in June 1923.



1922: the "Superior"

In 1924 Mr. Knudsen was named president and general manager of Chevrolet, and the following year, with production amounting to more than half a million vehicles for the first time in the company's history, manufacturing facilities were increased by the acquisition of a plant at Bloomfield, New Jersey, which was devoted to export operations. The year 1925 marked the first year of leadership, for Chevrolet became the world's largest manufacturer of cars equipped with three-speed transmissions.

The following year, 1926, recorded another expansion, when the Detroit plant of the General Motors Truck Corporation was taken over for the manufacture of Chevrolet front and rear axles. The Chevrolet grey iron foundry at Saginaw, Michigan, was added the following year.



A million of these in one year - the 1927 model

Production for 1927 established another record, passing the million mark for the first time with the production of 1,001,880 vehicles. And public approval of Chevrolet products pushed production up again in 1928, to reach a total of 1,193,212. During this year production was started in another assembly plant, located at Atlanta, Georgia, and construction of still another assembly plant was begun at Kansas City, Missouri.

Late in 1928 Chevrolet discontinued its four-cylinder cars and began production of its six-cylinder "International" models, which were introduced to the public in January 1929. The new model, powered by the famed valve-in-head engine, won instant approval, and the output for 1929 set another all-time high with the production of 1,328,605 cars and trucks.



1929: the "International"

Nor did expansion stop with the arrival of a depression. In 1930 a new spring plant was erected in Detroit, and production facilities were further increased by the purchase of the Martin-Parry Corporation body



Ten million cars in 23 years

opened and manufacturing plants were added at Saginaw, Michigan, and Muncie, Indiana.

Thus, seven years before World War II and slightly more than 23 years after its organization, Chevrolet had expanded from a little experimental shop to six groups of manufacturing plants and eleven assembly plants, one of which was devoted exclusively to exporting cars and trucks to assembly plants located in foreign countries. And further to serve the public, a total of 41 parts distribution warehouses had been established in the major cities of the country.

When the next management of the Chevrolet Division, General Motors Corporation, assumed direction of the company's affairs in October 1933, something over nine million Chevrolets had been built in the 22 years of the company's history. With the elevation of Mr. Knudsen to the executive vice-presidency of General Motors, the office of vice-president and general manager of Chevrolet was assumed by Marvin E. Coyle, who had been associated with General Motors since 1911 and with Chevrolet since 1917. Under his management the company began its climb from the lowered production period brought about by the depression, and two years later, in 1935, its output once more passed the million mark.

plant at Indianapolis for the production of commercial and truck bodies.

In 1931 a new bumper plant was put in operation in Detroit. The company celebrated the production of its ten millionth Chevrolet on its twenty-third birthday—November 3, 1934.

And five months later, in the spring of 1935, a new assembly plant at Baltimore, Maryland, was



The new automatic transmission and sheet metal parts plant, Cleveland, Ohio

In the meantime other expansion moves had been planned, and December 1936 saw the dedication of a brand-new commercial body plant at Indianapolis, which replaced the old building acquired in 1930. The new plant was regarded as the largest and most modern commercial body plant in the world, having been designed to give maximum convenience and safety to the workers, together with increased production efficiency.

During this year the construction of a new plant in Tonawanda, New York, was begun. It was designed to produce 1200 motors and 1200 axles per day and was completed and placed in operation the following year, to become the pride of New York state as the most modern and efficient plant within its boundaries.



A transmission manufacturing plant in Saginaw, Michigan



The 25 millionth General Motors vehicle—a Chevrolet

senger car sales. It was the sixth year since the beginning of the company that more than a million cars were built—and the company celebrated its twenty-fifth birthday in November 1936.

In 1938 Chevrolet led the industry in sales for the eighth time in nine years, and in 1939 it secured an even greater margin, becoming leader for the ninth time in a decade. Again in 1940 Chevrolet maintained its leading position in the industry.

In the peacetime production period during which Mr. Coyle headed the Chevrolet organization, the company, therefore, averaged more than a million cars a year. On January 11, 1940, General Motors celebrated the completion of its twenty-five millionth vehicle, a Chevrolet, and the event focused attention upon the fact that, of General Motors' huge production, more than 60% were Chevrolets.

In September 1940 Chevrolet observed a sales anniversary—seven years of sales leadership with an average of a million units per year. At the same time it celebrated the sale of 11 million used cars during the same period.

But even before the celebration took place, many months before war became a fact, Chevrolet was negotiating for the production of a military item—the beginning of a war production effort which eventually was to absorb all the energies and all the facilities of the organization.



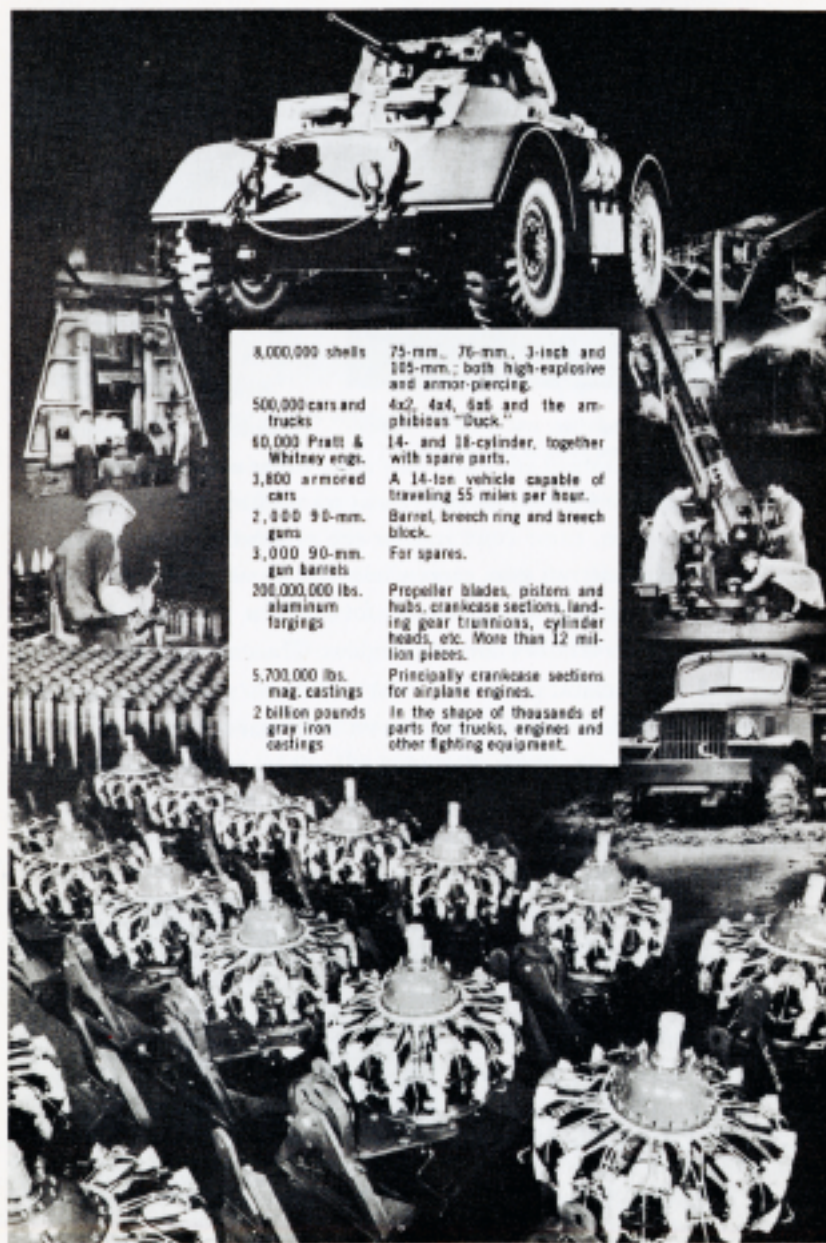
Conversion: tearing down fixtures and machines—typical of the change-over from peace to war production

CHEVROLET'S first contract with the War Department was signed in April, 1940. It called for the forging and machining of 75-millimeter high explosive shells and the task was assigned to the Forge and the Gear and Axle plants in Detroit. Before this contract was completed, however, an order was received for military trucks, called 4x4's because power was transmitted to all four wheels. In rapid order, then, came contracts for the production of parts for the 90-millimeter anti-aircraft gun, more shells and an armored car—all this while arrangements were being carried forward for the manufacture of 14-cylinder Pratt & Whitney aircraft engines. Thus, months before Pearl Harbor and the declaration of war, Chevrolet was plunging into a war effort that was to carry it through the next four years.

The new activity was destined to eliminate all passenger car production and reduce the output of civilian trucks to a trickle. The last passenger car left an assembly line on February 6, 1942 and the assembly plants were converted to war work. Some of them were leased to other divisions of General Motors, some were leased to the Government. All manufacturing plants were completely converted to war work. Production of civilian trucks continued in a modest way for a time, then was cut off, not to be resumed until 1944, when



Assembling P & W engines



it became apparent to Government officials that a menacing shortage of these work vehicles might seriously hamper the transportation phase of war production.

The only plant not entirely given over to war production was one in Saginaw, which with Government approval continued to

manufacture, in addition to war products, millions of service parts in order that the millions of Chevrolet cars and trucks on the roads of America could serve their owners until new vehicles could be produced.

On the facing page is shown a partial list of the war products manufactured by Chevrolet during the four years. Some of them, including the aluminum forgings, were produced in Government-built plants, but all were produced under Chevrolet management with "Volume Production for Victory" the slogan.

And more than one of the plants received the coveted Army-Navy "E" for excellence in production.

As a result, Chevrolet's return to peacetime production was not comparable with its plunge into the war effort, for it took place by slow degrees. The 1944 return to a limited production of civilian trucks



Shipping service parts for aging cars and trucks



Trucks for peace and war on the same assembly line



Tonawanda, New York
Manufacturing

Tarrytown, N. Y.
Assembly

Flint, Mich.
Assembly

Detroit, Mich.
Gear & Axle
Manufacturing

Some of Chevrolet's 25 Plants

Talade, Ohio
Manufacturing

Detroit, Mich.
Forge, Spring and Bumper
Manufacturing

Flint, Mich.
Manufacturing

Norwood, Ohio
Assembly

St. Louis, Mo.
Assembly

Bay City, Mich.
Manufacturing

Muncie, Ind.
Manufacturing

Kansas City, Mo.
Assembly

Los Angeles, Calif.
Assembly

Buffalo, N. Y.
Manufacturing

Saginaw, Mich.
Service
Manufacturing



Moving out war production machine tools to make a place for peacetime tools

(at the Norwood assembly plant) made it possible to expand this output when the defeat of Germany on May 5, 1945 brought about some terminations of war contracts. But it was not until after the defeat of Japan, on August 14 of the same year, that an all-out drive for complete conversion to peacetime operations could be made.

It was a comparatively easy task to swing into increased truck production, for parts for civilian trucks were already being manufactured—subject to shortages of materials and supplies which were the inevitable result of the nationwide readjustment. In the St. Louis plant, for instance, a contract for military trucks was terminated on Friday, August 17 and all military trucks on the assembly line were immediately taken apart and removed. On the following Monday, August 20, the first civilian truck was assembled on the same line, and production was increased daily thereafter.

But the manufacture of passenger cars was different: Since practically



After nearly four years—the first Chevrolets



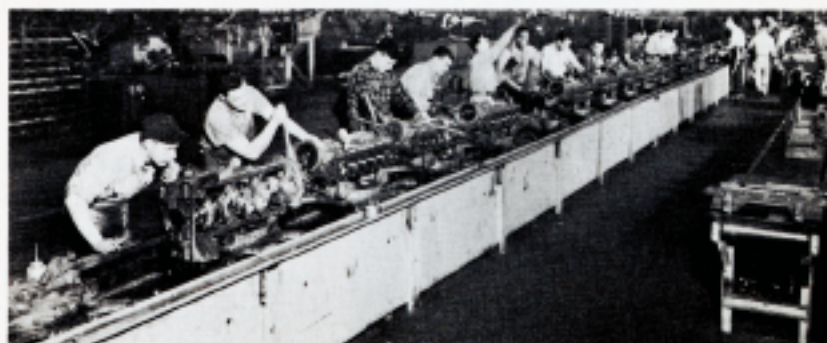
Plant layout men at work

all passenger car assembly lines had been torn out, it was necessary to rebuild them before assembly could begin. It was also necessary to reconvert the manufacturing plants before passenger car parts could be produced.

The long-awaited return to full peacetime production was consequently delayed. It was not until October 3, 1945 that the first passenger car came off the line at Kansas City—a plant, which, during the war, had been leased to the Oldsmobile Division for the manufacture of shells and which had to be cleared of all the special wartime production equipment before it could be used.

But following that event, the trickle of cars began to swell into a stream—delayed from time to time by recurring shortages of materials—as one assembly plant after another was cleaned out, then re-established in its prewar condition with improvements added in practically every place.

During this period many additions were made to the various manufacturing plants, notably the grey iron foundry at Saginaw and the com-



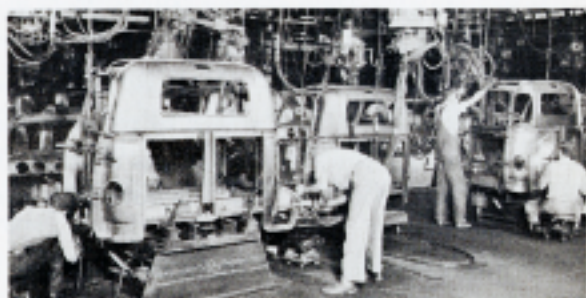
Assembling motors at the Tonawanda plant



Running in engines at Flint Manufacturing

Two new assembly plants were projected. One was at Flint, the other at Van Nuys, a part of Los Angeles. And while this was going on, another change was made in Chevrolet's management.

In June, 1946, M. E. Coyle, who had been with Chevrolet since 1917 and its general manager since 1933, was made an execu-



Truck cab assembly at Atlanta, Georgia

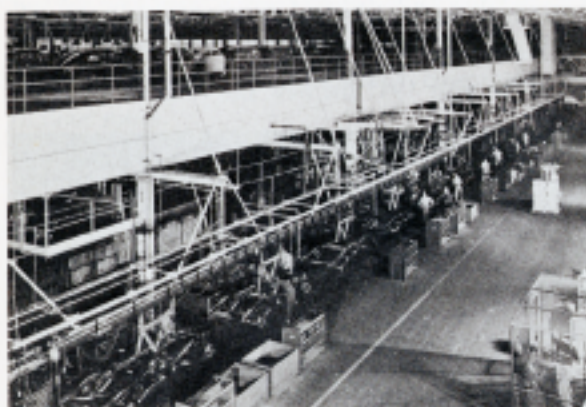


Assembly of rear axle, Buffalo, New York

commercial body plant at Indianapolis. The Buffalo assembly plant, erected in 1922 and converted during the war to the production of Pratt & Whitney engine parts, returned to the manufacturer of front and rear axles for passenger and commercial cars, while the Tonawanda plant confined its efforts to the production of motors.

tive vice president of General Motors. To replace him as general manager of Chevrolet, the directors of General Motors selected Nicholas Dreystadt, who had been with Cadillac since 1916 and its general manager since 1934.

Under the direction of

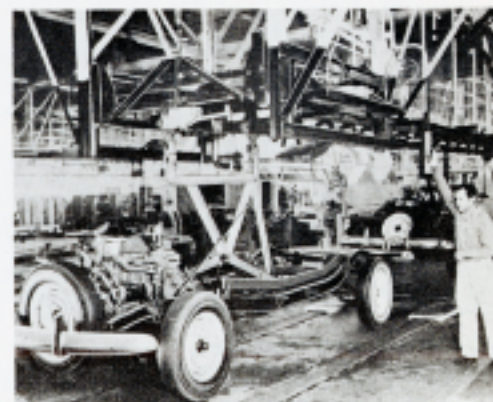


"Suspended assembly" at the new Flint plant

The 19 millionth Chevrolet vehicle was produced December 5, 1946 and at the conclusion of that year the production figures showed that a total of 707,975 passenger cars and trucks had been turned out, once more to establish leadership in the industry. Six months later, in June, 1947, the new Flint Assembly plant went into production, using a new type of "suspended assembly" operation.

And four months later, on November 10, 1947, the Indianapolis plant celebrated the completion of its 50 per cent expansion, consolidating its position as the largest exclusive commercial body plant in the world.

The same year, 1947, recorded the return of Chevrolet to its formerly well-established custom of turning out a million vehicles a year. The 20 millionth Chevrolet left the new assembly line at Flint on November 13, and when the year closed the total production was



A completed chassis being lowered to the floor at Los Angeles

Mr. Dreystadt, the drive for greater and greater production of better and better products continued as before, with the entire Chevrolet organization still acutely aware of the fact that the public's approval had to be earned.

recorded as 1,031,338 passenger cars and trucks—another year in the long record of established leadership.

During the latter part of the year 1947 the new Los Angeles assembly



Dramatic night view of cars ready for shipment to dealers, Flint Assembly Plant

plant at Van Nuys went into production. The new plant embodies the same type of suspended assembly operation as that installed at Flint, and its construction was distinguished by the installation of Brazilian type sunshades—vertical concrete slats so positioned that they excluded the direct rays of the sun but admitted plenty of daylight to both office and plant. It was said to be the first such installation in North America and served to reduce the inside temperature to a marked degree. The plant was formally dedicated February 18, 1948, and during the three-day open house that followed more than 60,000 Los Angeles citizens inspected its construction and operation.

During the same period the Chevrolet management planned another addition to manufacturing facilities in the shape of a plant which would be devoted to the manufacture of Chevrolet parts, not only for service

but for new cars. A site was therefore selected at Parma, Ohio, a suburb of Cleveland, and construction was begun. As 1948 drew to a close the construction work was practically completed, housing almost 30 acres of floor space.

Production, meanwhile, was maintained at the highest level possible under the existing conditions. Shortages of material, a problem which had persisted since the beginning of postwar production, continued to present difficulties. On many occasions it was necessary to fly critical parts to the various assembly plants in order to maintain production. But always the battle cry—"the highest quality at the lowest possible price" actuated the entire organization.

The 21 millionth Chevrolet vehicle was produced August 30, and the millionth 1948 vehicle was turned out November 2, one month earlier than the preceding year. It was therefore safe to predict that 1948 production would pass the record made in 1947 by a comfortable margin.

It was during this period that plans were put in effect for the production of a completely new line of Chevrolet passenger cars. The new Advance-Design trucks had been announced in 1947, a complete departure from the models produced theretofore, while only slight modifications had been made in the passenger car line. New designs for cars had been on the drawing boards for some time, however, and in 1947 it was decided to prepare for a new line in 1949.

The work of converting the plants for the new production was accordingly started in the fall of 1947, and even as some of the production lines worked on the production of 1948 parts, other lines were set up and organized for the production of 1949 parts. Hundreds of machine tools were moved in this fashion. New dies and tools were fabricated and tried out and prepared for production. The net result was that, instead of closing down plants for a long period of time while re-arrangements were made, the only time lost by production men was that required to take the annual inventory.

Upon the death of Mr. Dreystadt in August, 1948, W. F. Armstrong, a General Motors vice president, was named general manager of the company. Mr. Armstrong served until receiving a new assignment from

the corporation. To succeed him, directors of the corporation picked T. H. Keating, a 33-year veteran of Chevrolet, under whose able sales managership Chevrolet had quickly resumed during the postwar period its dominant position in the retail market. In addition to his post as general manager of Chevrolet, Mr. Keating was elected a vice president of General Motors.



T. H. Keating, General Manager of Chevrolet Motor Division, and the twenty-two millionth Chevrolet built within ten months of the twenty-one millionth

The year of 1949 saw other important developments. The engineering staff designed an automatic gearshift and plans were laid to introduce the revolutionary device for the first time on a low-priced automobile. Manufacturing facilities were expanded. The new Cleveland plant swung into production on the Powerglide transmission and sheet metal parts. Transmission manufacturing at Saginaw added a new plant. Also all-time manufacturing and sales records were broken in another manifestation of Chevrolet's tremendous popularity. Both marks fell in October. The production total had stood since 1941 when 1,339,952

passenger cars and trucks were built in United States and Canadian plants. Retail sales eclipsed 1936, the year that domestic dealers delivered 1,168,863 Chevrolets.

With 1949 drawing to a close, Chevrolet prepared to end another chapter in a record of accomplishment that has been one of the most stirring in American industry. But to thousands of men and women who make up Chevrolet "The Chevrolet Story" was far from finished. Already they had raised their sights. Improved safety, increased convenience and more lasting motoring pleasure were in the minds of an organization which year after year has steadfastly maintained a policy of the highest quality at the lowest cost. Similarly, the nationwide body of independent businessmen who sell and service Chevrolets was dedicated to greater achievement. To them a 38-year tradition of complete owner satisfaction had become a creed.



Administration building—Los Angeles plant, Van Nuys, California

Chevrolet has pioneered many major improvements in low-priced cars during the last thirty-seven years—of which the following are only a few.

Unisteel Body Construction

Knee-Action Gliding Ride

Valve-in-Head Engine

Synchro-Mesh Transmission

Box-Girder Frame

Double-Articulated Brake Shoes

Shockproof Steering

Hypoid Rear Axle

Turret Top Body Construction

"Blue-Flame" Combustion Chamber

Stabilized Front-End Mounting

Complete Body Insulation

Safety Plate Glass All Around

Specialized 4-Way Lubrication

Tiptoe-Matic Clutch

Duco Finish

Concealed Safety-Steps

Combined Crankcase Ventilator, Oil Filler and Oil Separator

Electric Starting Motor

Foot-Controlled Headlamp Dimmer Switch

Bonded Brake Linings

Center-Point Steering

Curved Windshields

Powerglide Automatic Transmission

CHEVROLET MILESTONES

First Over the Years

1911—Chevrolet Motor Company of Michigan organized November 3; first Chevrolets developed in a Detroit workshop.

1913—Valve-in-head engine introduced, and period of plant expansion started with acquisition of home plant in Flint, Michigan. Plant also rented in New York City. Nearly 6,000 cars built.

1915—Self-starter introduced, first in low-price field.

1918—Chevrolet becomes a part of General Motors, and enters new period of plant expansion and sales. Closed models offered by Chevrolet for the first time.

1920—Retail stores opened in various cities for direct sale of Chevrolets to the public.

1923—The 1,000,000th Chevrolet built February 27. Chevrolet is on the threshold of volume operations. Assembly plants at Buffalo and Norwood, Ohio, acquired.

1927—Chevrolet sales exceeded 1,000,000 units for the first time, and for the first time Chevrolet led all other makes in sales. Total of 1,001,880 units sold. The 3,000,000th Chevrolet built. Cars have recent improvements, including single-plate clutch, air cleaner, semi-elliptic springs.

1928—New plant opened in Atlanta. The 4,000,000th and 5,000,000th Chevrolets built. Chevrolet again leads in sales.

1929—Six-cylinder valve-in-head engine adopted on all cars, along with combined crankcase ventilator, oil filler and oil separator.

1931—Chevrolet starts its long run of leading the field in sales every year except one from 1931 to 1941. Bumper plant acquired in Detroit.

1934—Knee-Action introduced. The 10,000,000th Chevrolet built.

1937—The 13,000,000th Chevrolet built. Chevrolet is first low-priced car to use Unisteel construction with Turret Top.

1939—Vacuum gearshift introduced to Chevrolet buyers, another industry "first." The 15,000,000th Chevrolet built.

1941-1945—Company plants geared all-out for war production. Aircraft engines, armored cars, shells and guns among the types of materiel supplied in steadily increasing volume to the armed forces.

1945—First postwar passenger car off the line October 3.

1946—Production mounts as plant conversion is completed. M. E. Coyle, general manager, elevated to executive vice presidency of General Motors Corporation.

1947—New assembly plant dedicated at Flint, Mich. Chevrolet production returns to million class with 1,031,339 units manufactured.

1948—New assembly plant dedicated at Los Angeles. Production hits 21,000,000 on August 30. Millionth 1948 model completed November 2.

1949—New series of completely re-styled passenger cars introduced January 22. Production augmented by new plants at Cleveland and Saginaw. T. H. Keating, general sales manager, assumes general managership of company. All-time production and sales records go by the boards. Company prepares to introduce new automatic transmission on 1950 passenger cars.

1950—January—Announcement of new 1950 passenger car models with Powerglide automatic transmission optional on De Luxe models at extra cost.

