Nash Airflyte

NASH




# 1949 DATA BOOK

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Nash Motors
*Division of*
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Nash Airflyte

# THE Nash CREED

DOWN THROUGH THE YEARS the name of Nash has come to mean certain things in an automobile.

A certain *character* that is all its own.

It is a *character* that has lifted this once-modest company into the foremost ranks of America's mightiest automobile makers, one of the four strongest, financially, and one that now serves throughout the world.

It is the *character* that you see reflected in Nash as an organization, in its widespread dealer family . . . and in the two score thousand skilled people who create, design, build and service Nash automobiles.

It is this *character* that shines out in the perfection of the new Nash Airflyte, that you see and that you *feel* behind the wheel—and what millions of owners of Nash automobiles have discovered before you.

It is this *character* that has gained for Nash a unique loyalty in the hearts of owners.

The character that *is* Nash dates back to the very beginning, when this company was founded by a man who forsook the top-most position in the automobile industry because he was convinced that an aggressive independent company, backed by unlimited capital and completely free to set its own engineering standards, could and would build a better automobile.

The integrity of the man and his beliefs were hammered into the very steel of the cars that bore his name.

★ *"A Nash must be trustworthy"* . . .

★ *"A Nash must be built to stand up better than other automobiles"* . . .

★ *"Nash must represent the engineering leadership of the industry"* . . .

It is in the spirit of those objectives that Nash reaffirms its creed.

1. A Nash is known as a car that endures. It shall remain so. It shall be built of the best materials available for each specific use.

2. Nash believes that the first test of fine engineering is efficiency . . . the ability to deliver better transportation at a lower cost to the consumer. We are determined that the wide margin by which Nash cars lead the industry in gasoline economy shall be maintained. Saving of fuel is good sense, not only for the individual, but for the conservation of our national resources.

3. We hold that the safety of a Nash automobile is paramount. There can be no compromise for the sake of design or appearance. Nash is pledged to continue its leadership in such advanced features as Unitized body-and-frame construction.

4. Nash automobiles shall be built to be driven anywhere. They shall be engineered to meet all

climatic extremes to be encountered on the North American continent. Nash automobiles shall always offer ample road clearance.

5. No changes in design shall be introduced that call for sacrificing headroom, legroom or seating comfort of occupants.

6. No change shall be made in a Nash that is not a sound improvement, thoroughly proved so by ample road testing. Nash engineering shall eschew the novel and the sensational and shall concentrate on the fundamental projects for increasing the utility and pleasure of driving an automobile. Such contributions as Weather-Eye Conditioned Air and scientific Soundproofing shall continue to be characteristic of Nash leadership.

7. Nash automobiles shall be built for minimum upkeep and maximum ease of service.

8. Nash cars shall be sold only by men of character in each community, men who can maintain the highest type of service in that community.

9. Nash regards the sale of a Nash automobile as not the end of a transaction, but as the beginning of an obligation, shared equally by factory and dealer, to deliver to the buyer the utmost which has been built into that car.

Nash Motors

# Nash
# GREAT CARS SINCE 1902

The modern Nash automobile, with its direct predecessors, the famous Rambler and Jeffery automobiles, has a romantic history extending far back into the bicycle and carriage era.

When Charles W. Nash resigned as president of General Motors to purchase the Thomas B. Jeffery Company of Kenosha, Wisconsin, on August 16, 1916, he acquired a profitable, well-known business which began back in 1879.

Thomas B. Jeffery, a native of England, was a struggling inventor in Chicago—his chief distinction had been the invention of the railroad velocipede—when he decided to return to his homeland for a visit, in 1878. While in England he saw a bicycle which so interested him that he contracted for the necessary parts to assemble a number of them in the United States.

In 1879, nearly a year after he signed the contract, Jeffery offered his first bicycle for sale. He called it the "Rambler," and it became one of the most famous names in bicycle history.

In 1881, he and R. Philip Gormully formed a partnership which later became the G & J Manufacturing Company.

About this time Jeffery invented the clincher bicycle tire. Known as the G & J tire, it was of the novel

pneumatic type; it revolutionized the bicycle and its use and was the predecessor of the clincher-type automobile tire. The G & J Tire Company was formed sometime in the 1880's to manufacture the product.

In 1899, Gormully and Jeffery sold their profitable bicycle business to the American Bicycle Company, and turned their attention to the automobile.

While Thomas Jeffery was searching for a plant in which to produce automobiles, his son Charles designed and built an automobile with backing of the American Bicycle Company.

On September 22, 1900, visitors to the International Exhibition and Race in Chicago saw for the first time this Jeffery-designed car. It was called the "G & J." Although this car was not marketed, its design was the basis for the first Rambler.

It was not until early March, 1902, that Jeffery was ready to place his first new automobile on the market. With his son he had built and tested models A and B during 1901, but Jeffery was not satisfied with his product until models C and D were built. Priced to sell for $750 and $825, these cars were shown at an automobile exposition in Chicago's Coliseum, March 1, 1902.

In that first year, 1,500 Ramblers were built. The Rambler thus became the world's second mass-produced automobile—a year after Olds and a year ahead of Ford.

Within the next few years, gradual improvements were made on the Rambler; by 1905 total floor space of the Rambler factory was 14 acres. Jeffery died in 1910, and four years later his heirs changed the name of their car from "Rambler" to "Jeffery."

By 1916 the products of the Thomas B. Jeffery Company ranked with the best of the day, but the owners were anxious to retire. In 1916, Charles W. Nash, who resigned as president of General Motors to build a car under his own name, took active charge of the business which he had purchased from the Jeffery family.

Nash himself was one of the great builders of the automobile industry, which he entered as president of Buick after 20 years in the allied carriage business. His success was achieved with unusually difficult beginnings. When he was 6, he was "bound out" to a Michigan farmer under a guardianship court order. He was to work for his room and board until he was 21, and then to receive $100 and some clothing. But six years was enough for him, and when he was only 12, he ran away and was on his own from then on.

He was still making only $1 a day at 27, when he joined the Flint Road Cart Company as an upholstery stuffer. Here, natural qualities of leadership brought him to the superintendency of the plant within six months. He was vice-president and general manager of the company in 1910 when he turned to the automobile business. Forty-six years old, he became president of Buick, then within two years, president also of Oakland Motor Company, the Olds Motor Works, General Motors Truck Company, and finally of the parent General Motors Corporation.

For the remainder of 1916, Nash continued to turn out Jeffery cars. In the fall of 1917, the 1918 Nash model was introduced, which was the first Nash-designed car. The name Nash meant a great deal to

many Americans at that time, for 10,000 cars were sold in the first full year of production.

Nash Motors Company produced more than 11,000 Nash trucks in 1918—a record unequaled by any other manufacturer prior to that time. Most of these trucks were the famous four-wheel-drive Quad which did a magnificent job in World War I.

In 1924, Nash acquired the trade name and equipment of the LaFayette Motor Car Company which was founded in 1920 at Indianapolis. This company, which was moved in 1922 to Milwaukee, produced expensive cars, selling for more than $5,000. Nash did not continue production of the big LaFayette, but in 1934 introduced a low-priced LaFayette which was produced until the fall of 1940, when it was superseded by the Nash "600."

For its bodies, Nash, in 1919, turned to the Seaman Body Corporation which, too, has a rich tradition going back to 1846. In 1919 Nash Motors purchased a half interest in the business, and the other 50 per cent was acquired in 1936.

A few months later Charles Nash, then 72, found younger leadership for his company in George W. Mason, at that time president of the Kelvinator Corporation of Detroit. Nash wanted Mason to head his Company, but Mason declined. Negotiations eventually resulted in a merger of the two firms, with Nash as chairman of the board and Mason president of the new Nash-Kelvinator Corporation.

Nash Motors continued to grow, introducing in 1941 the famed Nash "600" and aiding the U. S. and her allies in World War II with record production of aircraft and other war materiel.

After the war Nash was among the first automobile manufacturers to resume production. It required only six weeks to reconvert the tons of equipment and machinery to the manufacture of automobiles. In 1947 Nash produced more than 115,000 cars—the first time since 1929 that the company had passed the 100,000 mark. Plants were acquired in Toronto, Canada, and El Segundo, California, to bring manufacturing capacity to 250,000 units annually. Only the steel shortage has prevented this aggressive producer from reaching its goals.

And now, in 1949 Nash introduces the completely new Airflyte, which has been on the drawing boards for more than seven years and which took more than five years to complete.

## Nash FACTORIES

Spacious, modern and efficient manufacturing facilities contribute in no small measure to the quality and dependability of NASH motor cars. Under ideal working conditions and with modern tool equipment the Nash craftsman performs his job with greater ease and better quality of the finished product. These things are recognized by every expert in the industry and American motor car builders long since started planning decentralization to obtain some of these advantages. Nash has a natural location to secure just such advantages in labor relations, mechanical quality and production efficiency.

The Kenosha plant includes 2,190,377 square feet

of floor space. In Milwaukee Nash owns the largest self-contained body plant in the industry. Its floor space totals 1,202,285 square feet and was designed and built exclusively for auto body manufacture. This is the previous Seaman Body Corporation plant which Nash acquired in full in 1936 by buying the last half interest in the firm. Nash had an investment in Seaman prior to that time but took over full operation and possession in 1936. Also in Milwaukee is a modern parts plant with 448,833 feet of floor space, and an export assembling plant of 76,525 feet.

## Nash
## NATION-WIDE SERVICE

Service for NASH motor cars is available almost everywhere. There are NASH select dealers strategically located throughout the United States and Canada. There are 25 parts warehouses to quickly supply parts to dealers everywhere and this insures fast and competent service—gets the owner on the road as soon as possible.

Service prices are fair and consistent throughout the country with factory-approved flat rate charts for service charges covering nearly all maintenance operations. Every Nash dealer carries an adequate stock of genuine parts assuring owners that replacements will always be exactly as the original part built into the car when it was manufactured.

Nash maintains a corps of Traveling Field Service Supervisors in the United States and Canada whose function is to keep dealers informed of the latest and

most efficient service shop procedure and to recommend the latest types of service equipment. These men carefully inspect the service facilities of dealers, their employees and current methods to guarantee the protection of Nash owners. Replacement parts and approved accessories are subject to review and examination by these careful field men so that every owner in any part of the country can have the same high grade service and the same factory-tested products.

Every Nash Service Man knows the story of the infinite pains taken by the Nash organization to provide the best possible service to every owner. The facts need telling and retelling, however, because they frequently become an important part of the sales message, especially when selling in competition with a salesman who may not be as well informed as you are.

After the design and engineering features of a new Nash car are determined by management, the Service Engineering Division goes to work devising methods, tools and processes to provide the new NASH with complete service. This job is just as important to the owner as the original design because he knows (or you should tell him) that the mechanic who works on his car does so with the full benefit of all that the factory has developed to simplify and economize on service operations.

The tools, alone, developed for service operations require twelve months study every year and the evolution of methods and processes and special machines is never ending. Not only do Nash engineers constantly work on these problems but they are always alert to the latest developments in the trade

that supplies service material. Hundreds of new developments are under way all the time, some exclusively ours and others by vendors to the industry. The efficiency of Nash service countrywide is to a large measure due to the training and the devotion of these little known NASH SERVICE ENGINEERS.

## OWNER'S SERVICE POLICY

With every new NASH the owner receives an OWNER'S SERVICE POLICY and identification card. The policy outlines in detail the obligations of the factory and the dealer to the owner of the new car. This SERVICE POLICY is effective for the duration of the standard warranty period, which is defined as 90 days after delivery of the car, or 4000 miles, whichever shall occur first. The OWNER'S SERVICE POLICY and identification card will be included with the "Owner's Manual" when the car is delivered. If not, the dealer is required to furnish one.

When the term "standard warranty" is used in the automobile business it has reference to the "Automobile Manufacturers Association Uniform Warranty." This warranty, used by all members of the association, states specifically the obligations of the automobile manufacturer to the buyer and expressly denies any other obligation on its part or incurred by unauthorized agents. It does not include the dealer nor does it support any guarantees made by the dealer to the buyer. No other member of the manufacturers association offers a different or better warranty. The Uniform Warranty is published in full in the Owner's Manual.

# 1949 NASH AIRFLYTE LINE

The name "Airflyte" has been applied to the 1949 Nash, including both the "600" and the Ambassador. In each of these series are available a Four-Door Sedan, a Two-Door Sedan and a Brougham. In addition, each of these is available in Super, Super Special, and Custom interior trim and appointments. Details are given later in this Data Book, under "Accessories and Equipment."

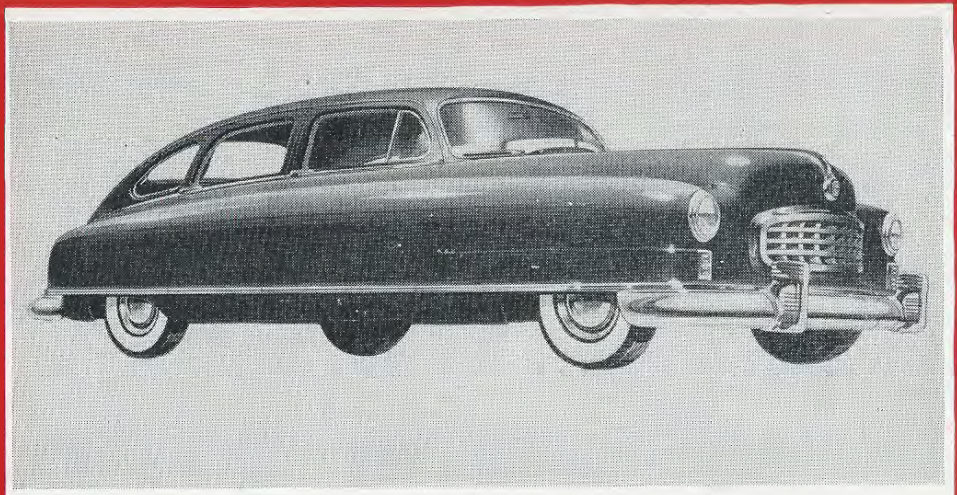
The 1949 NASH Airflyte is ultra-modern in design as well as in engineering advancements. Either at first glance or after careful inspection, its trim, graceful lines impart a sense of true beauty. This is a distinctive car . . . a truly aerodynamic car . . . the world's first car to enclose all four wheels in one great sweep of body line.

There is much more than design to these new bodies, however. Here is beauty with a reason. Inside and out, the new NASH Airflyte has been built with owners' desires in mind. An equitable relationship has been maintained between eye appeal and the practical desires of the potential owner.

## PASSENGER COMFORT

First comes passenger comfort in the new NASH. The overall height of the car has been reduced six inches with adequate head room maintained, also wider front and rear seats and greater leg room. Elbow room, having more practical significance than mere seat width, has been increased both front and back.

Ride and handling characteristics are phenomenal



"600" FOUR DOOR SEDAN

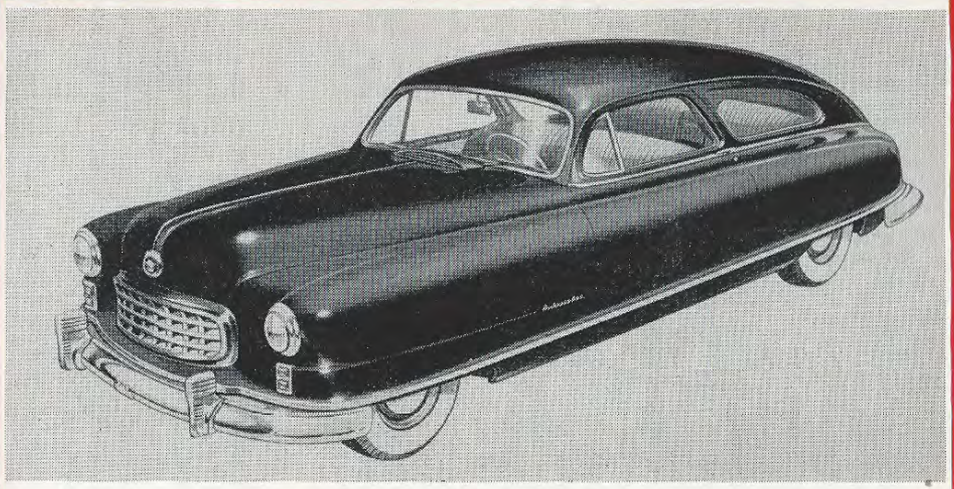
. . . far in advance of anything even NASH ever offered before. The "ride" especially has benefitted from the new suspension and lower passenger position.

Although bodies are completely restyled, Unitized construction is retained and advanced in the new "600" (and now also in the Ambassador). Ease of servicing and accessibility of mechanical parts has been improved with no sacrifice to styling in these matters. Rear doors are now front-hinged for safety, eliminating the danger of "air-drag" in case of accidental opening while the car is in motion. Vision, especially in front, has been greatly improved, and for driving ease the instruments are contained in a nacelle housing (called the "Uniscope") on the massive steering post and easily visible through the wheel. The driver can see every instrument at a single glance without losing sight of the road ahead. You have more room inside the new NASH with lowered overall height, greater riding and driving ease and all the new features which characterize modern design trends.

## ENCLOSED WHEELS

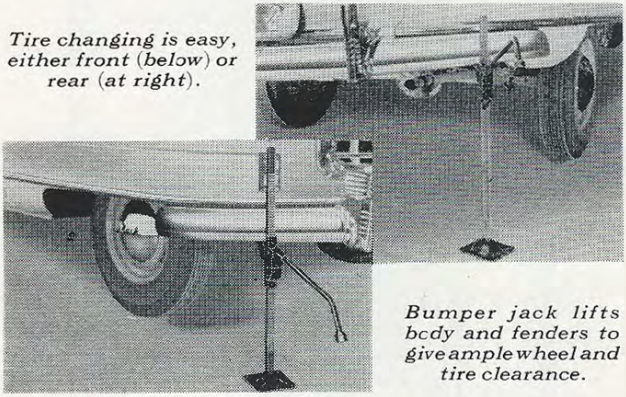
You will notice that the front wheels are completely enclosed in the 1949 NASH Airflyte. This marks a new style trend in motor car design. The wheels are as easily serviced as ever—the body contour allows ready accessibility and the front wheel layout permits full wheel swing on turns. Both front and rear tires can be changed easily.

The rear wheels are enclosed in the same manner and the actual layout of the front and rear wheel housing for 1949 provides a pleasing and symmetrical



AMBASSADOR BROUGHAM

design with no service complications. No rear (or front) wheel shields are necessary and hence there is no need to remove them for tire changes. This is sensible and practical modern design.



*Tire changing is easy, either front (below) or rear (at right).*

*Bumper jack lifts body and fenders to give ample wheel and tire clearance.*

## WHEEL TREADS

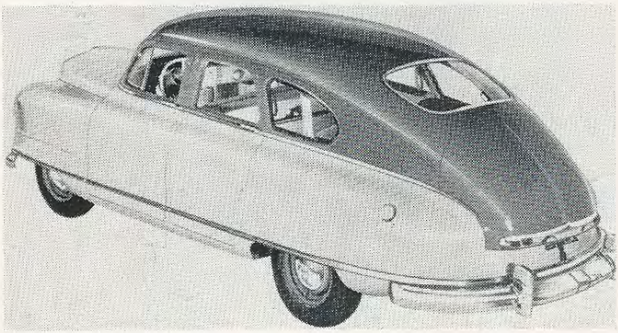
The front tread is about $2\frac{3}{4}$" narrower than in 1948, a negligible compromise to accommodate the front wheel design. The front tread is $54\frac{11}{16}$" which provides a short turning radius. The greater rear tread insures favorable stability and handling characteristics. Non-uniform treads are standard practice in the industry, and usually the front tread is smaller than the rear; the only exceptions occur when body or frame design interferes with full rear tread. There has been no standard tread for many years and all full sized American cars now have different front and rear treads.



AMBASSADOR FOUR DOOR SEDAN

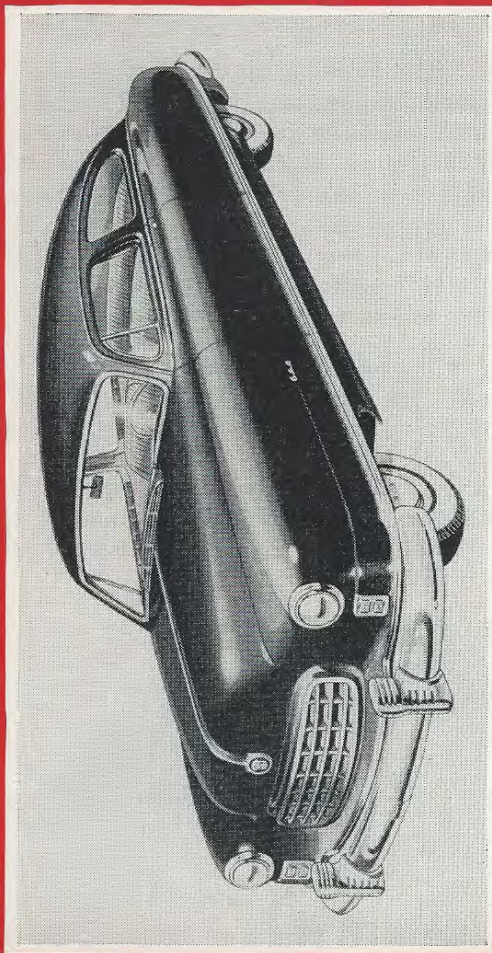
The trunk light assembly is attractive and extremely practical. The two tail-lights and the right and left hand directional lights are incorporated together with the license bracket flood light and the trunk lid locking handle. This makes all of the rear lights convenient to service because they are readily accessible on the inside of the trunk lid. When the lid is lifted completely a secondary tail-light (inside the trunk) protects the car from on-coming traffic.

The angle of the rear window too is important. It provides ample rear compartment lighting, full rear vision mirror width and still insures privacy in the car. The rear panel, extending from the top to the bumper, is a continuous sweep which provides ample luggage room, storage space, rear passenger compartment head room and yet is graceful and completely in harmony with the car design.



*Ample height of luggage compartment and rear passenger head room are provided by smooth sweep of roof panel.*

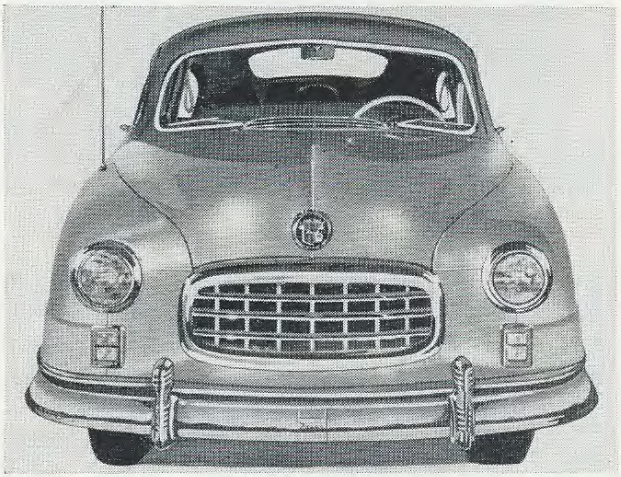
Nash Airflyte



"600" TWO DOOR SEDAN

# Nash Airflyte

The 1949 NASH Airflytes are the evolution of the famous "600" that made motoring history when it was first introduced in 1940. It was designed and engineered far in advance of the postwar field to provide the attributes that most car owners wanted. In it was incorporated big-car roominess, riding comfort and performance with highly desirable operating economy.

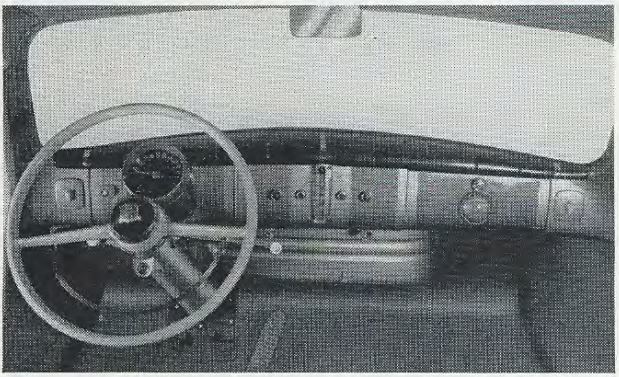


*Low center of gravity assures road-hugging stability.*

All of the features of the previous "600" have been retained and enhanced in the ultra-modern 1949 NASH Airflytes. They have more room than ever, finer riding characteristics, unparalleled driving ease and sparkling performance. For economy—this 1949 "600" outshines every competitor.



*The Custom Brougham interior sets a new high for luxurious appointments. Between the seats is a handy compartment for small parcels.*



*The cockpit panel, replacing the conventional instrument panel, has been moved forward for greater knee room.*

The structural engineering design created for the "600," to accomplish all of the advantages that have made it famous, are retained and improved in the 1949 models. It is the strongest and safest type of construction ever developed for a motor car. The new curved, one-piece shatterproof windshield not only adds to the smooth exterior styling, but it also provides greater driving safety by offering wide area of vision.

## UNITIZED BODY

The Unitized type of construction, which was developed especially for the Nash "600," employs engineering principles that are revolutionary in automobile bodies. Seven million dollars were expended for machine tools and dies to manufacture this body, and to that investment have been added many more millions to incorporate the same structure in the new sleek streamlined 1949 Nash Airflytes.

Under this graceful body contour is the latest engineering accomplishment of Nash engineers in the development of super-strength and safety in this type of construction. We cannot emphasize this too much —sheer beauty alone is not enough for Nash engineers. They demand the strength, durability and safety that has made the name Nash synonymous with the finest motor car construction in the world.

So often design takes precedence over practical necessities of the body that many of these characteristics are lost. Nash engineers have kept their standards so closely drawn that nothing has been sacrificed in utility to achieve advanced styling. In the final en-

gineering designs they found it possible to improve the quality for which Nash has been famous. Design, of course, is extremely important but engineering integrity remains a Nash basic policy.

Nash engineers several years ago anticipated style trends, and have developed a novel front-end design that would lend a flowing, graceful contour from the front to the back fender. This meant housing the front wheels in a fender that did not break the body sweep. In the 1949 "600" and Ambassador Airflytes they have accomplished a design which places both front and rear wheels within the body structure.



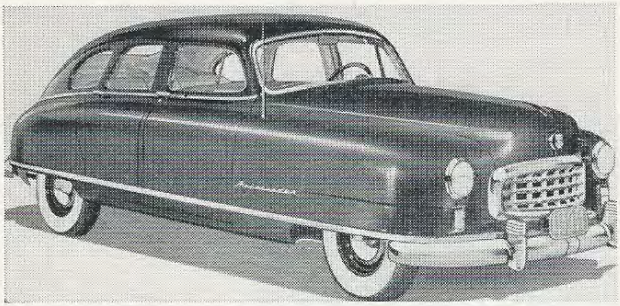
*Another Nash "first"—enclosed front wheels. Turning radius is even better than in 1948, measuring only 20 feet 2 inches on the 1949 "600", 21 feet 4 inches on the 1949 Ambassador.*

This has been done without sacrificing steering, and in the 1949 models we find, for the first time in automotive history, front and rear wheels enclosed within the body. Fender "shields" are entirely eliminated.

There are new engineering features throughout the 1949 Airflytes, but the ones first evident are the lower, longer, wider bodies with enclosed front wheels,

the graceful sweep of the body contours and the careful attention to every external detail.

The beautiful new 1949 Nash Ambassador also has the advantages of the most advanced Nash engineering. The Unitized body is entirely new in the "fine car" field. In addition to superb design it has the strength of a steel girder bridge with the safety of a modern streamlined train. Every advance feature of Nash engineering research has been incorporated in this car. It is wide, long and low with plenty of headroom, elbow width and legroom.



*The 1949 Ambassador Airflyte—long, low and wide.*

The interior height at the front seat is 36 inches and at the rear seat 35 inches. Full six-passenger capacity with ample room for every rider is one of the desirable features. Nothing has been sacrificed in this body to styling. It has more width, ample headroom and better interior accessibility than ever before.

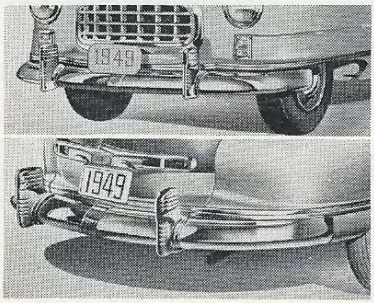
The interiors are luxurious, with every practical convenience provided. In some interiors the back of the front seat is built with a recessed compart-

ment for personal articles or packages that ordinarily have to be held or placed behind the rear seat or in the trunk.

There are many new design features and new mechanical features visible or evident from the outside of the car. The massive new radiator grille is harmonious and impressive but the mechanically minded prospect may be influenced more by the new headlight grouping providing directional as well as parking lights below the sealed beam headlights. The wrap-around bumper is perfected in the 1949 models and extends far around to protect the fenders.

## BUMPERS

For many years the automotive industry has been engaged in devising bumpers that would lend added protection to fenders. A great many attempts have been made to protect front and rear fenders with




*Bumpers have rounded contours outward of the guards, to ward off blows. Sections are deeper than in 1948, for greater strength.*

bumpers which had substantial support and could still ward off the annoying and oft-times costly repairs resulting from casual bumps. Nash engineers

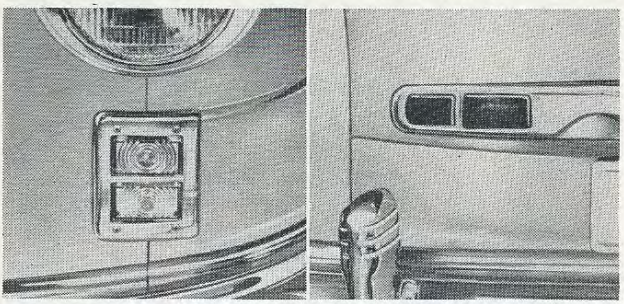
worked out practical bumpers that would defend front and rear fenders against costly damages, and with sufficient rigidity to satisfy the needs of this primary motoring requisite.

Both the front and rear bumpers are substantially constructed and carefully engineered to provide extra safety across the fender aprons.

Bumper guards are large and strong and keep direct contact, front and rear, from making the usual fender dents that are so annoying to the motorist.

## DIRECTIONAL SIGNAL

Among the outstanding safety devices fashioned by Nash engineers are the front and rear directional signals. They are available as accessories and provide the driver with indicator warnings on turns to right or left. When the directional signal control is installed on the steering column the driver can indicate, by setting the indicator arm, either left or right hand turns.



*Directional signals, factory-installed on "Custom" models, can be obtained in all other Airflyte models.*

Signal lights, in front below the parking light and on the rear next to the stop light, indicate the driver's intention. The driver does not have to use hand signals, and in night driving or stormy weather the signal light is extremely convenient. When pushed forward it indicates a right hand turn and pulled backward—a left hand turn. A blinking signal bulb is located in the translucent knob of the lever which indicates that the directional signal is operating. Lever returns to "off" automatically as soon as the turn is completed.

## HORNS

A semi-circular horn ring replaces the full circular type used in 1948. Although the full circular type has advantages from the standpoint of driver convenience while turning a corner, the semi-circular design is more desirable in the Airflyte series because of the location of the Uniscope.

Horns are moved from the engine compartment to a position forward of the radiator, just back of and above the grille. In this location the horns have more carrying power at highway speeds. Engineering checks indicate that the horns can be heard 50 per cent farther.

## THE NASH AIRFLYTE FOR 1949

A quick summary of the preceding pages

A great car—built by a great company—serviced by the finest dealer organization in America.

Nash Motors and its predecessor companies have built **great cars since 1902.**

Nash plants are located in Kenosha and Milwaukee, Wisconsin and El Segundo, California. Executive offices are in Detroit. Abroad, Nash cars are assembled in Mexico, Brazil, Union of South Africa, Australia and New Zealand.

Strategically located Nash dealerships throughout the country, served by 25 modern parts warehouses, assure skilled service to Nash owners.

The 1949 Nash Airflyte line includes two series—the "600" Airflyte and the Ambassador Airflyte.

Each series is available in a Brougham, Four-Door Sedan and Two-Door Sedan. Each is likewise available in Super, Super Special and Custom models.

Only Nash Airflyte offers one-piece curved windshield in all series and body types. No center post to block the vision.

The Nash Airflyte is six and one-half feet wide, yet only 62 inches high.

Enclosed front wheels are a Nash "first". Tire removal is easy, both front and rear; turning radius is even better than in the 1948 "600."

Among other Nash "firsts" in the 1949 Airflyte line are the flush-mounted trunk lid handle and the Uniscope.

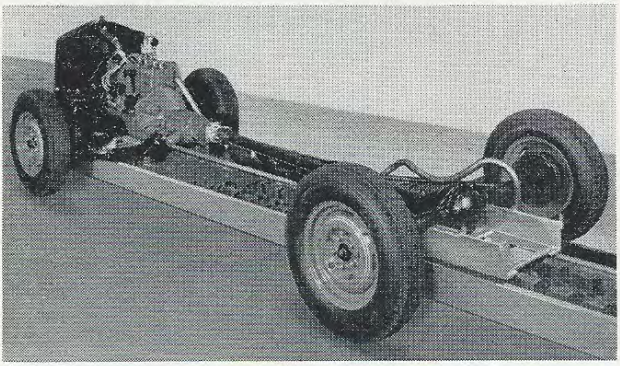
The 1949 Airflytes were made possible by Nash pioneering in Unitized body-and-frame construction, resulting in the first "600" introduced during 1940.

# BODY FEATURES

## THE UNITIZED CONSTRUCTION

Structurally the 1949 Unitized bodies are basically the same as the design introduced in the 1941 "600," and now proved by seven billion miles of owner driving. For 1949 all previous Nash engineering and production and service experience has been drawn upon to further improve strength, durability, and service accessibility. Now the Unitized body is used in both series—Ambassador as well as the "600."

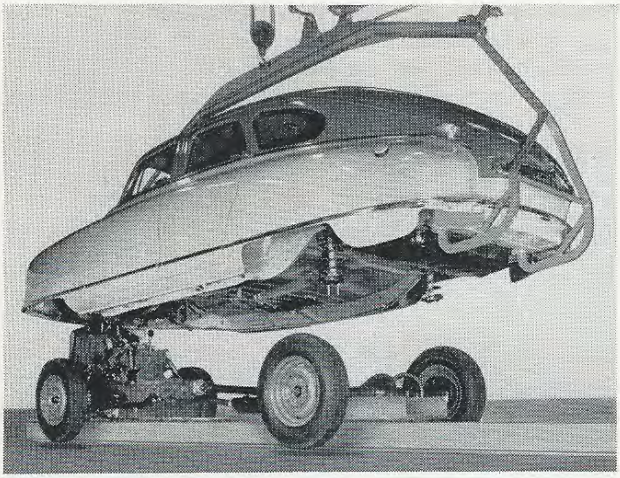
In ordinary automobile construction a heavy chassis frame is used, carrying all the running gear such as wheels, springs, engine, drive system, steering, and the like. The conventional body is bolted to the frame during assembly of the car. Actually, the body provides by far the greatest part of the total rigidity and



*Nash running gear units are assembled in a "jig" on the production line, in proper relative position.*

structural strength of the entire car. The chassis frame has become primarily a means for uniting the chassis elements on the assembly line.

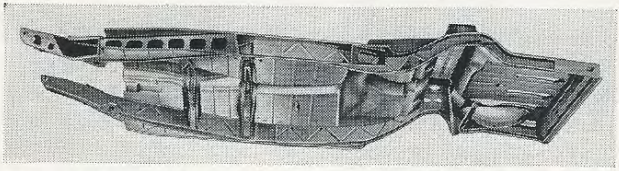
Nash engineers have recognized the normal function of the body in providing structural stiffness, and in the prewar "600" they worked out an entirely new assembly method which permitted elimination of the usual chassis frame. In the new method, now further refined for 1949, the running gear units are assembled to each other in a jig or framework carried on the production line. These running gear units include the wheels, rear axle, drive system, engine, front suspension, cross member at the rear of the engine, steering gear,



*The Unitized body is lowered onto the running gear during car assembly. Coil springs have been mounted under body.*

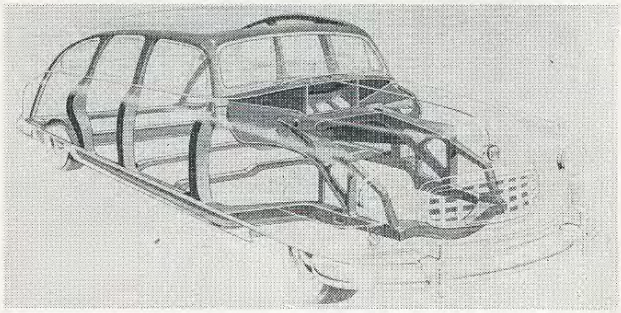
exhaust system and radiator. The appropriate Unitized body is lowered and connected to the running gear.

With this system the usual chassis frame is eliminated —in fact the word "chassis" is not used in Nash plants. Now the major parts of the car are simply the body and running gear.



*This reinforced floor pan, seen from below, serves as the foundation of the 1949 Nash Unitized body.*

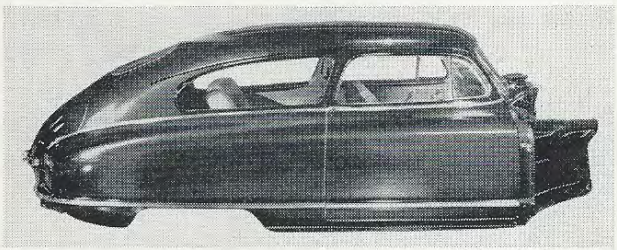
The chassis frame usually weighs between two and four hundred pounds. Between ½ and ¾ of this weight can be eliminated by use of a well designed Unitized construction. More metal has been added



*Built like a girder bridge, the Nash Unitized construction uses the rigid body structure as the framework of the car.*

to the Nash body to compensate for the slight rigidity previously furnished by the chassis frame. Nash engineers have analyzed the function of each body member and have provided adequate strength to meet the requirements of driving on rough roads. At the same time needless weight has been cut out—an important factor in achieving maximum fuel economy, car performance and ease of handling.

Several attempts have been made by other manufacturers to achieve the benefits of the Unitized construction. Most of these designs were not successful and have been discontinued. In some cases manufacturing cost and complications were factors, while in others structural defects were encountered due to improper design. In still other instances, the cars actually were increased in weight, indicating inefficient use of structural materials in the body.



*The smooth exterior of the Unitized body gives but little hint of the sturdy girder-like framework within.*

## SOUNDPROOFING

Nash cars have long been known for their quietness inside the passenger compartment. This condition has been due largely to the effective use of insulating materials on those parts of the body which tend to transmit vibration and noise.

In the 1949 models quietness inside the car and soundproofing have been further enhanced by an extensive study of sources of noise and vibration. The aim has been to locate and eliminate, one by one, the offending noise-makers. Corrective methods include design changes to alter the rates of vibration, insulating metal-to-metal joints and efficient use of sound- and vibration-absorbing materials. To save needless weight only minimum amounts of the most effective type of vibration absorbers have been specified. Extensive use is made of automatic equipment at the Milwaukee Body Plant for spraying plastic materials. This arrangement insures exactness in area covered and amount applied.

### USE OF SAND-MORTEX

Doors, body floors, and side panels are treated with Sand-Mortex, an asphalt-like material which holds in suspension a controlled amount of sand. This material quiets the panels to which it is applied, by dampening out noise-producing vibrations and absorbing sound waves. In addition, several types of felt and treated paper products are applied to body panels where tests have shown that these materials are the most effective. A typical installation may be found across the front of the body, under the cockpit panel.

Nearly all modern cars use insulating and sound-deadening materials of one sort or another. The superiority of the 1949 Nash over competitive cars lies in the efficient use of these materials, plus the elimination of many of the usual noises and vibrations at their source.

The final result is a car which sets an entirely new standard for quietness in the passenger compartment —gone are annoying rattles and buzzes and road noises. From the functional and noise-reduction standpoints little improvement can be made in the 1949 series by use of dealer-applied body and chassis undercoatings which have been promoted in the last few years.

## BONDERIZING

All sheet metal parts such as fenders, radiator shells, hoods and the entire body inside and outside are Bonderized, before the enamel finish is applied, to provide a tenacious bond for the finish and to retard rust.

Bonderizing is a combination rust-proofing process and chemical primer. The metal parts are sprayed with a chemical solution. This solution reacts chemically and combines with the metal at the surface to produce a durable non-metallic protective coating. Permanent adhesion of the enamel is assured because the Bonderite coating is sufficiently absorbent to provide a tenacious bond for the finish—far better than bare metal alone, as customary on many cars.

Bonderizing prevents the spread of rust under the finish usually caused by a scratch or dent. Further, it prevents cracking, chipping and peeling of the finish due to shock or vibration. More lasting beauty of the

finish is assured because experience over a period of years has proved that a Bonderized finish is many times more resistant to rust than untreated metal.

## ENAMEL FINISH

Nash cars for 1949, as in previous years, are finished in a durable, weather-resistant baked enamel, in colors of permanent quality and pleasing shades. This enamel finish has great depth and smoothness, attained by superior characteristics of the material and method of application. Extra polishing required by other types of finishes is not necessary to secure smoothness.

Because of the inherent gloss of the Nash enamel, expensive treatments with wax, glazes and similar materials are not needed to preserve the finish. Uniform films of enamel are applied, which lessen the likelihood of thin spots developing due to the rubbing and polishing on the production line which often are required of ordinary finishes to obtain gloss.

## PASSENGER COMPARTMENT

In the post-war type of car design the popular low streamlined effect can be obtained easily so far as exteriors are concerned. It is quite another matter, however, to secure lower seating position, low overall height and low body floors without sacrifice of head room or without resorting to high tunnels and oversized floor-wells which make access difficult and impose "housekeeping" problems.

Nash engineers have done these things without sacrifice of either headroom or seat cushion depth. Then there is always the problem of road clearance in modern lower, longer motor cars, but again Nash has not decreased road clearance below the 7 to 8 inch standards which have proved satisfactory for most types of customer service. In fact, the road clearance is even better than in the Nash 1948 models. (Several competitive cars have up to two inches *less* road clearance than the 1949 Nash.) Road clearance is further discussed on page 133.

### SEATING

The 1949 front seating width is 6 inches wider than in the 1948 model. Rear seat width at elbow height also has been improved. Floor is 2 inches lower than in the previous model and the roof is fully 6 inches lower. The seat-to-floor dimension is approximately 1½ inches less, but no sacrifice has been made in the front or rear cushion depth.

Front seat travel in the 1949 Nash is lengthened from 4 to 4½ inches. The cushion "rise" while moving

forward is increased from $\frac{7}{16}$ to $1\frac{1}{4}$ inches. The adjustment mechanism is improved in that the 1949 seat is locked on both sides. In 1948 and previous models only one side was locked when the handle, just forward of the left front corner, was released.

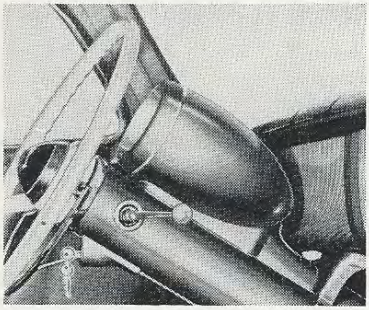
A comparison of major body dimensions may be of interest, as they show the marked gains made in the seating width of the 1949 models.

| Dimension | Inches 1948 | 1949 |
|---|---|---|
| Passenger Compartment—Length | 105 | 112 |
| Elbow Width—Front Compartment | 57 | 63 |
| Elbow Width—Rear Compartment | 60 | 61 |
| Legroom—Front Compartment | 41—37 | 41—36½ |
| Legroom—Rear Compartment | 39—43 | 40—44½ |
| Headroom from seat cushion—front | 36 | 36 |
| Headroom from seat cushion—rear | 36 | 35 |

The first item is particularly noteworthy in the 1949 Nash as it represents the longest passenger compartment in the industry, relative to wheelbase. The "passenger compartment length" is measured from the base of the windshield to the base of the rear window. This dimension is exactly as long as the wheelbase in the "600." The dimension is exceeded by only two competitive cars, and then only by a few inches. These cars, however, are both much higher in price and have wheelbases a foot or more longer than the "600."

## THE UNISCOPE

The front compartment of both Nash models for 1949 reflects not only attractive design, richly finished interiors, but sound thinking in relation to instruments and controls. The operating instruments most frequently referred to by the driver are uniquely grouped in the "Uniscope." This is a nacelle-like housing attached to the massive steering column. (A "nacelle" is a streamlined housing, one use being in airplanes to house the engines). The car operator thus is saved the necessity of shifting position of his head while driving to see instruments which in some other cars are spread out across the instrument panel.



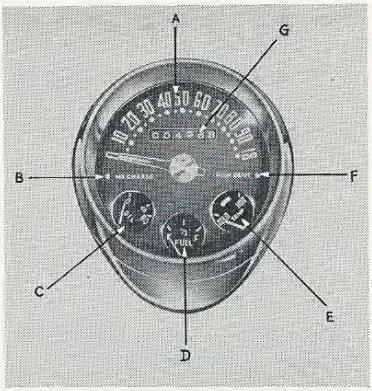
*The Uniscope not only improves visibility of the instruments, but also offers marked advantages in accessibility for servicing.*

In recent years some improvements have been made by clustering the instruments in front of the driver. Visibility still remained questionable, however, due to the distance of the instruments from the normal line of vision. Nash has solved that problem by putting the speedometer, the oil pressure gauge, the fuel indicator and the engine temperature gauge, together with a no-charge signal and a high beam headlight signal, in

the Uniscope. This housing, built on top of the steering column, is so convenient to the car operator that either day or night he can check his operating conditions without appreciably shifting his line of vision from the road.

*What the driver sees in the Uniscope:*

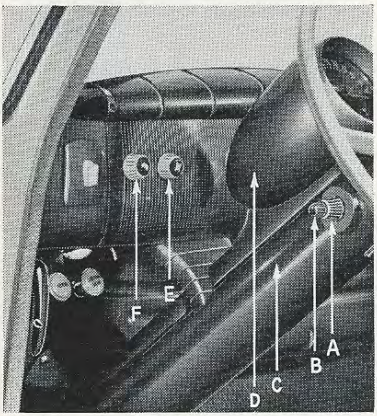
A. *Speedometer*
B. *No-Charge Signal*
C. *Oil Indicator*
D. *Fuel Indicator*
E. *Engine Temperature*
F. *High Beam Signal*
G. *Mileage*




The instrument dials have been made proportionately smaller to compensate for the reduced distance from the driver's eyes. A lower lighting intensity on the dials has been found possible at this reduced distance. Far less light is needed with the Uniscope instruments than with the conventional panel-mounted type. A handy dimmer switch is provided for the dials, concentric with the main light switch on the left hand side of the steering column. (Only an "off-and-on" switch was provided on the previous models.) Signal lights for generator charge and headlight beam position are made small and of relatively low intensity to avoid glare at night.

Instrument dials are black, with white lettering and pointers, as this combination is easier on the eyes at night.

Of the five conventional panel instruments, the ammeter probably is the least needed and least used by the average driver. In the 1949 Airflytes a newly developed no-charge signal takes the place of the usual ammeter and warns when the generator is not charging, either due to low engine speed or as a result of defective electrical units. A red signal shows on the left side of the Uniscope under these conditions.

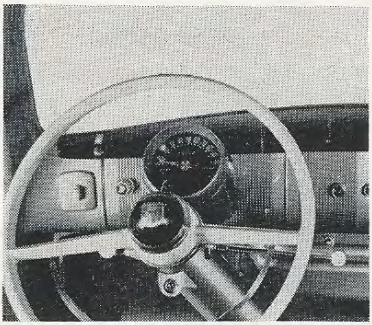



*Light switches (A and B) are on steering column (C), Weather Eye controls (E and F) on cockpit panel. "D" is the streamlined Uniscope housing. Controls underneath are for parking brake, hood lock, cruising gear and dome light.*

The signal light is more reliable than a conventional ammeter, but in addition it provides a warning of a burned-out bulb; normally the light comes on every time the ignition switch is turned on before starting the engine. A simple wiring hookup is provided, between the generator and battery (shunting around the cut-out relay).

Directly opposite the generator signal light, on the right hand side, is another similar signal which indicates when headlights are on high beam. Another new feature is the engine temperature indicator which now shows an "operating range" for best engine heat, rather than specific temperatures.

The "cockpit panel" now becomes merely a housing for the radio, the Weather Eye conditioned air controls, and the glove compartment. A few infrequently used controls are mounted underneath, such as the hood



*The Uniscope dials are closer to driver's normal line of vision.*

lock, the cruising gear controls, the windshield wiper, and the Weather Eye cowl ventilator handle. Controls used by both driver and passenger, such as those for the radio, have been designed to protrude as little as possible.

The cockpit panel now is reduced in depth and is moved several inches forward to provide greater knee room. Rounding the upper edge of the cockpit panel and removing control knobs from the passenger side of the panel also contribute to safety.

## SAFETY

References to safety have already been made in several places. Safety is becoming of increasing importance because of the rapidly growing number of motor vehicles in everyday use in this country. Admittedly, safety is affected to a large degree by errors in driving judgment, but Nash engineers have done a lot to protect the occupants of Nash cars and to reduce the severity of accidents.

Among the many safety features in the 1949 Nash cars might be mentioned these:

- Front-hinged rear doors
- Lowered center of gravity, for better stability and resistance to overturning
- Unitized body structure, cradling the passengers in a framework of steel
- Rounded upper edge of the cockpit panel
- Upholstered and rounded upper rear edge of the front seat
- Removal of control knobs from cockpit panel and minimum protrusion of those remaining (like the radio controls)
- Ash trays located at extreme ends of cockpit panel—minimizing possibility of passengers bumping into sharp edges of open trays.
- Speedometer and instruments moved closer to the normal line of vision
- Increased vision forward (was above average even in the 1948 Nash)
- Wrap-around bumpers, with rounded corners to ward off blows
- Improved brakes with less pedal pressure
- Easy steering, contributing to reduced fatigue on long trips.

Most of these safety factors are self-evident. Particular attention, however, is called to the new front-hinged rear doors, which prevent serious accidents should a rear seat passenger inadvertently open a door when the car is travelling at high speed. A front-hinged door cannot be opened under these conditions due to air pressure outside, but a rear-hinged door may "catch" the airstream and swing open unexpectedly.



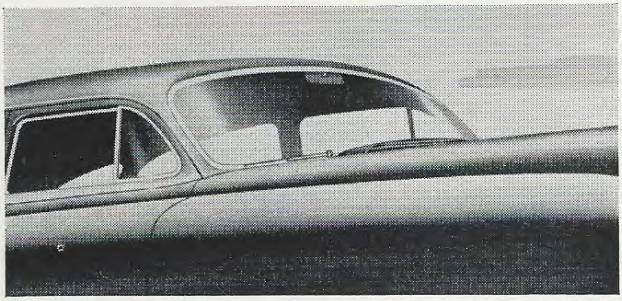
*Hinging the rear doors at the front side provides an important safety feature for rear seat passengers.*

## WINDSHIELD

A distinctive feature of the 1949 Nash is the one-piece windshield, formed of curved laminated safety glass. Nash thus becomes the first car in the industry to adopt a one-piece windshield in all models. There is

no center post to obstruct vision. The ends of the glass are curved back to permit placing the front pillars rearward, out of the normal line of vision.

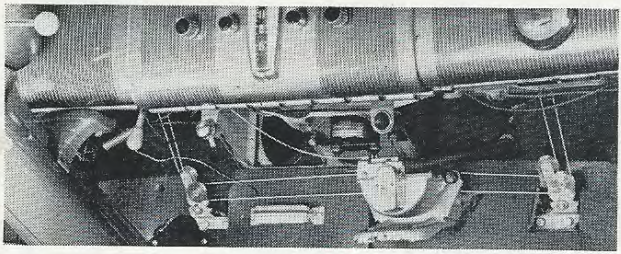
The new windshield has 700 square inches of glass area, as compared with 660 square inches in the Nash 1948 two-piece windshield.



*Nash is first to adopt a one-piece windshield in all models.*

Wiper blades are of a new type having considerable flexibility to hug the curved glass firmly. The new wipers cover about 11 per cent more area than in 1948, and the wiper "heads" are positioned to provide a clean area which is best adapted to the driver's and passenger's needs.

Windshield wiper motor is located inside the Weather Eye heat distributing cover. Steel cables running on smooth-running pulleys connect the single motor to the two wiper heads. The cable mechanism is practically noiseless, which permits the new accessible loca-

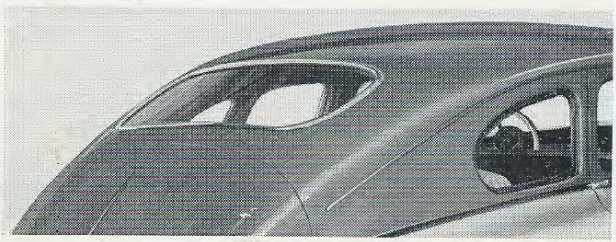


*Removing the Weather Eye heat distributing cover exposes the wiper motor for servicing or adjustment.*

tion of the wiper mechanism. No more blind groping forward of a cluttered instrument panel to perform some simple adjustment of the wiper mechanism.

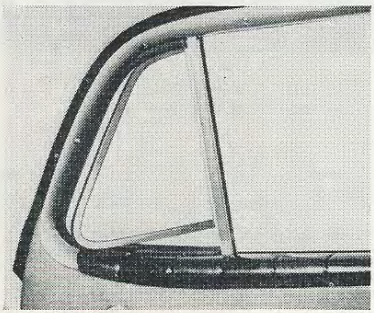
## REAR WINDOW

Vision to the rear is improved, as compared to the 1948 models, due to the wider rear window which cuts down the blind spots at the rear corners. The distance between rear and side windows is decreased



*Wider rear window reduces "blind" areas at rear corners.*

three inches on each side (was 19¼—now 16¼ inches). Height of the rear window remains the same as in 1948 comparable with other cars in the industry having the "slipstream" type of back. A few cars have greater height of the rear window but invariably in those cars trunk height and usuable capacity have been sacrificed.



*Ventilator windows in front doors of all Airflyte models are formed of tempered curved glass, to harmononize better with body contours.*

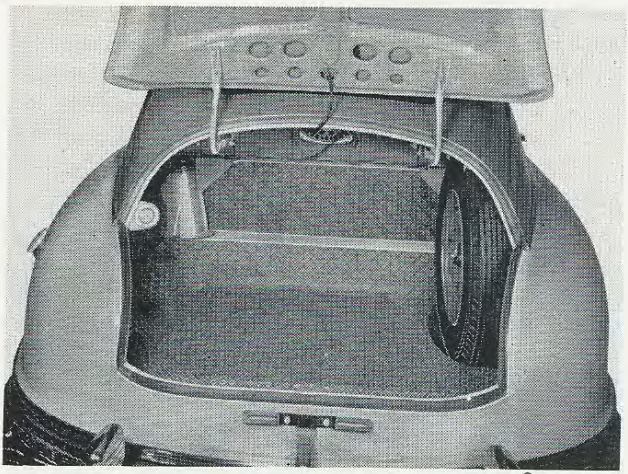
## THE AIRFLYTE TRUNK

The trunk compartments in the 1949 Nash "600" and Ambassador are particularly outstanding. Where other post-war designs have compromised interior height and usable cubic foot space, Nash has retained and even improved the spaciousness of their trunk. This is further evidence of engineering foresight.

Full interior height has been maintained with the spare tire mounted vertically on the right side, leaving maximum floor area clear for luggage. Compare this feature with competitive cars! The new spare tire position is made possible by the extra height of the trunk and the location of the package shelf behind the rear seat.

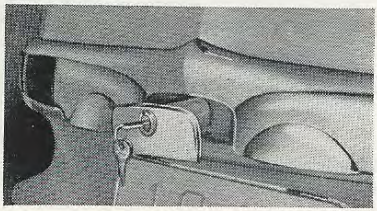
In actual measurements using small sand bags, the trunk has 24 cubic feet of available space with the tire in place, and over 28 cubic feet with tire out—as good as in any competitive design, and better than most. Actually, the trunk space is more usable in the new model than equivalent volume in the 1948 Nash because less storage space is lost around and forward of the tire.

The trunk lid is counter-balanced with a spring for easy opening and closing. This replaces the mechanical prop which has been used in previous models. The trunk handle is recessed in the lid medallion; when



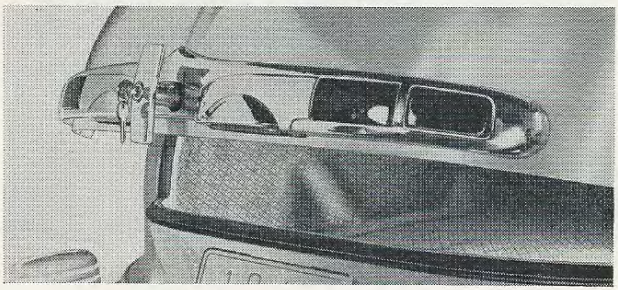
*Trunk space is generous, with full interior height and accessible all the way to the front. Tire is out of the way at the right, yet handy when needed.*

unlocked the handle snaps out under spring pressure and can be turned to the left (counter clockwise) to open. This convenient arrangement insures against forcing the lock and provides a flush rear contour when on the road.



*On turning the key the handle snaps out.*

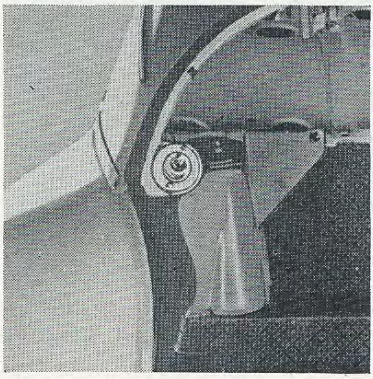
The illustration on page 45 is a full open view of the trunk compartment. Tail lights and the directional signal lights are mounted in a single assembly, together with the trunk handle and the license flood light, on the lower ledge of the trunk compartment lid. This arrangement is unique among new models. The possibility of damage to these vital rear lights from casual



*Turning the handle unlatches the trunk lid.*

bumps is reduced, because they are removed from the fenders and are better protected by the massive rear bumper.

Another important feature is the service accessibility of the rear light circuits; when the rear deck lid is open the bulbs can easily be replaced or the wiring repaired. The next important point in this rear light assembly is the trunk compartment light which provides interior illumination. Connected with the tail light circuit this trunk light serves a dual purpose. Facing outward is a ruby glass lens which serves as a rear warning light

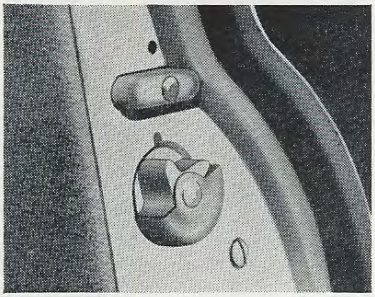


*Dual-purpose trunk light, connected to tail light circuit, serves also as a rear warning light when rear lid is open.*

or extra tail light when the trunk lid is open. This provides safety for night driving because no matter whether the trunk is open or closed a red light is present to warn oncoming traffic.

## DOORS AND LOCKS

Doors are fitted with rotary type door locks which permit closing securely with only a flick of the hand. Slamming is not necessary to insure closing fully—the doors "click" shut with but slight contact between latch plate and rotary lock. The door handle merely releases the rotary lock and permits it to swing free from the latch plate on the body pillar.



*Rotary latches permit easy door operation and, at the same time, insure positive latching action.*

All hinges are equipped with sturdy springs which hold the doors firmly in the wide open position. This feature is appreciated when entering the car with hands full of parcels. The door is prevented from swinging shut of its own accord before the passenger is completely in the car.

The "hold-open" hinge springs pass "over center" thereby acting to close the door when pushed a few inches from the full open position. Strength of the springs is carefully controlled to provide the best degree of hold-open and over-center action.

Interior linkage of the door locks has been altered for greater driver convenience. With the 1949 mechanism it is possible to lock either door from the inside by reversing the normal unlatching movement of the control handle, and later to unlock the door from the outside using the key. In the 1948 design this procedure was impossible, due to the hidden control linkage going "over-center."

If the driver should be locked out because of locks freezing or loss of the door-ignition key, it is possible to enter the car by way of the trunk. The rear seat can be loosened by taking out two bolts at the top. It is not possible, however, to get from the passenger compartment to the trunk without damaging the seat structure.

TWO TYPES OF KEYS

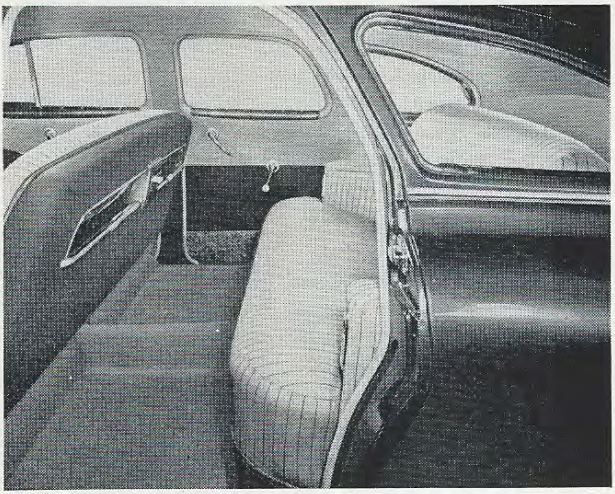
As in previous years two different keys are provided —one to unlock the ignition and the passenger compartment doors, and the other for the trunk compartment and the glove box.

Doors have a substantial, solid sound when closed. This characteristic is not accidental, but is the result of careful design of metal panels and structural framework plus the proper use of vibration-absorbing "Sand-Mortex" on the inside of the panels.

Clean design and workmanship of the hinge area is particularly outstanding in Nash cars. When the doors are open there is a notable absence of the rough, unfinished body structure so evident in many competitive cars.

## INTERIOR APPOINTMENTS

A wide variety of combinations of upholstery and interior trim are available. The "600" and Ambassador series are both manufactured in Super and Custom trim. In addition to the standard equipment for Super and Custom, there is available a number of optional combinations of upholstery, as well as individual accessories and equipment items.



*A handy rack in the back of the front seat is part of the custom equipment.*

## ADDITIONAL EQUIPMENT INSTALLED AT FACTORY

CONDENSED SUMMARY

| | *600 Series* | | *Ambassador Series* | |
|---|---|---|---|---|
| | *Super* | *Custom* | *Super* | *Custom* |
| *Brougham* | *4943* | *4953* | *4963* | *4973* |
| *Four Door Sedan* | *4948* | *4958* | *4968* | *4978* |
| *Two Door Sedan* | *4949* | *4959* | *4969* | *4979* |
| Arm Rest—Rear Center | N.A. | *Extra | N.A. | *Extra |
| Carpet Inserts—F. F. Mat | Std. | N.A. | Std. | N.A. |
| Front Floor Carpet | N.A. | Std. | N.A. | Std. |
| Clock—Electric | Extra | Std. | Extra | Std. |
| Directional Signals | Extra | Std. | Extra | Std. |
| Foam Cushions | Extra | Std. | Extra | Std. |
| Lights—Courtesy | N.A. | Std. | N.A. | Std. |
| Oil Filter† | N.A. | N.A. | Std. | Std. |

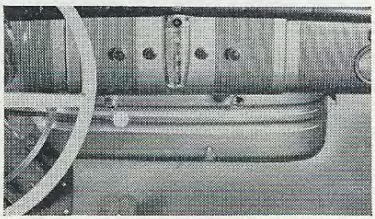
N.A.—Not Available
Std.—Standard, No Extra Charge
*Four Door Sedans only
†Filter available on "600" as dealer-installed equipment

A "Super Special" series also is manufactured. The main difference from the "Super" is in the type of upholstery—not shown in the above table. Complete details are given on page 142.

## WEATHER EYE

At the time it was first introduced in the 1938 series, Nash startled the industry with its Conditioned-Air system which revolutionized all existing standards of motor car heating and ventilation. In one broad sweep, this new system minimized or eliminated dangerous carbon monoxide and obnoxious exhaust fumes . . . steam-covered windshield and windows that made driving dangerous . . . cold-causing drafts and icy rear seats. This feature changed the winter driving habits of thousands of people.

The Nash Weather Eye conditioned-air system is a compactly designed heating and air circulating unit which runs almost the full width of the body, but is concealed forward of and below the cockpit panel. It is mounted high enough to give unobstructed leg and foot room. It has heating capacity to insure comfort at outside temperatures even down to zero or lower. It is also a year-around air conditioner because its filtering and ventilating features can be used in summer.



*A neat shroud under the cockpit panel serves to distribute fresh air uniformly across the passenger compartment.*

The air intake is at the top of the cowl where a special scoop is permanently built into the body. An air filter keeps dust and bugs out and the rain catcher permits the air conditioner to be used while driving in rain.

The Nash air intake, as in previous years, is well away from the exhaust fumes of cars ahead—unlike the low grille intakes of many other cars.

When the car is in motion fresh air is always being circulated through the interior instead of stale, dusty, devitalized air as with ordinary hot water heaters.

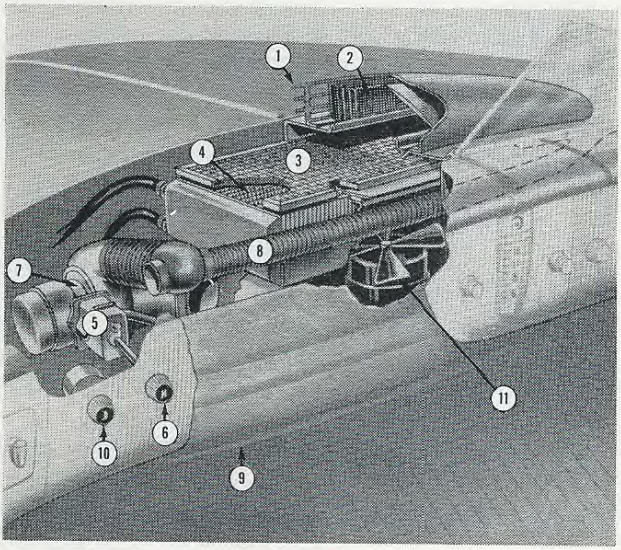
Circulated fresh air has another great advantage. It maintains a slight air pressure inside the body so drafts and cold air cannot leak inside—neither can carbon monoxide fumes from leaky mufflers or exhaust pipes endanger the occupants.

Selective temperature control is another feature. A thermostatically controlled water flow valve—set by Weather Eye control knob marked "H" at the left side of the cockpit panel—maintains interior temperatures at just the right comfort level. The driver selects this interior temperature just as he would set the furnace thermostat in his home—and from then on the Weather Eye maintains the temperature inside the car even though the outside air temperature changes through a wide range.

Steaming of windshield and car windows is reduced because fresh air, dried by heating, is brought into contact with the glass. When normal air circulation becomes insufficient for adequate defrosting under extreme conditions, a special motor driven blower increases flow of dry air right at the windshield.

In heating and ventilating public buildings it is commonly recognized that 20 cubic feet of fresh air per minute for each person is ample for comfort and freedom from odor. Even with all windows closed the Nash Weather Eye provides well over 100 cubic

feet of air per minute at all but the lowest car speeds and at normal speeds on the highway several hundred cubic feet of fresh air flow into the body and out through the crevices around windows and doors. With window or ventilators open only a crack the flow of fresh air is still greater.




*Fresh air is forced through the cowl ventilator (1) at a rate as high as 700 cubic feet a minute, passes through the dehumidifying chamber (2), through dust and pollen filter (3), then through large heating core (4). Heat is controlled by thermostat (5), set by control knob (6). Air is forced by defroster fan (7), through conduits (8), to windshield area and passes around baffle (9), to passenger compartment. Switch (10), controls defroster fan and pressurizing fan (11), used for low speeds and while car is parked.*

Extensive changes in the 1949 Nash Weather Eye greatly improve the efficiency of this already well-designed equipment.

Major advantages include:

- Greater heating effectiveness at low car speeds.
- Even better distribution of warm air in the passenger compartments.
- A more effective water shedder at the air intake.

Heat transfer capacity of the heater core has been increased 10 per cent. At speeds below 30 mph., where fresh air flow capacity is most needed, the new design is 5 to 15 per cent better due to larger areas of air intake, water shedder and filter. Low speed heating is further benefited by the use of a positive fan under the heating core, to supplement air flow induced by forward motion of the car. (The 1948 design did not incorporate a main air circulating fan—only fans for the defroster.) Greater air flow into the body means increased defrosting effectiveness at low car speeds.

## UNIFORM AIR DISTRIBUTION

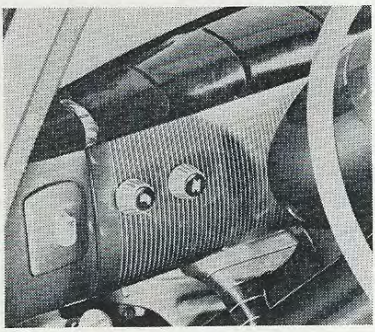
A neat distributing cover of new design is provided at the front of the passenger compartment to assure better distribution of the sheet of warmed fresh air delivered along the floor. The driver's and passengers' feet and legs are warmed without overheating the face and upper parts of the body—an effect found desirable for best personal comfort. Heater "trap doors" and air valves are eliminated in the new design, in the interest of simplicity of operation and adjustment by the driver.

The defroster fan now draws all its intake air from below the heater core, thereby adding to the total

heated air delivered to the passenger compartment and compensating for the chilling sensation sometimes encountered, chargeable to increased air circulation around the passengers' faces. The previous type of thermostatic temperature control is continued. This thermostatic valve, pioneered by Nash, has been adopted by all but one make of car.

Separate motors and fans are provided for heater and defroster. A five-position rotary switch at the left side of the cockpit panel gives the choice of:

(1) Defroster "High"
(2) Defroster "Low"
(3) "Off"
(4) Heater "High"
(5) Heater "Low" plus Defroster "Low"



*Knob marked "D", on the left, controls five-position electrical switch. Knob "H" sets thermostat.*

This switch is marked "D" (meaning "Defroster") and located at the left hand side of the cockpit panel.

A redesigned water shedder or separator at the air intake is capable of handling 15 per cent more water before the filter becomes saturated. The improved

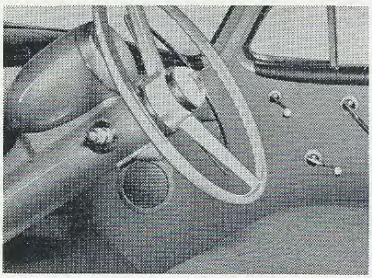
water shedding characteristics are built-in, not dependent on seals or special attention during installation.

The filter is readily removable for replacement when dirty by taking off a cover plate in the engine compartment.

## RADIO

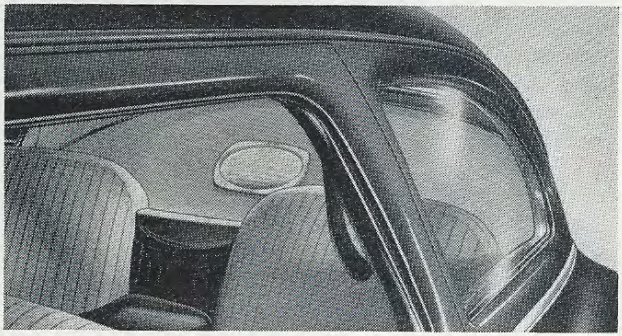
The 1949 Nash Airflyte radio has been re-engineered thoroughly to improve performance, appearance and convenience of this popular accessory. Restyled controls remain in the center of the cockpit panel, where they are handy to both driver and passenger. The novel foot control, conveniently located by the driver's left foot, is continued—a valuable safety feature, as it permits changing stations or quieting the radio without taking the hands from the wheel.

A major advancement has been achieved in the acoustics within the passenger compartment. All radio-equipped cars are provided with a speaker mounted in the upper part of the right hand "squab" panel (the so-called "kick" panel under the cockpit panel, just forward of the front door). This speaker is designed to provide good reception in the front compartment, as good or better than in 1948.



*Front speaker is mounted under the cockpit panel just forward of the right door.*

A second speaker is provided to improve reception in the rear seat. This speaker is mounted flush in the package shelf back of the rear seat. This location utilizes the trunk compartment to add to the speaker resonance. A separate rheostat is provided under the cockpit panel to permit adjusting volume of the rear speaker, independently of the front. The rear speaker emphasizes low notes, while the front speaker accents high tones. The same two-speaker principle has been used in the most expensive home radios where excellence of tone values is a major factor.



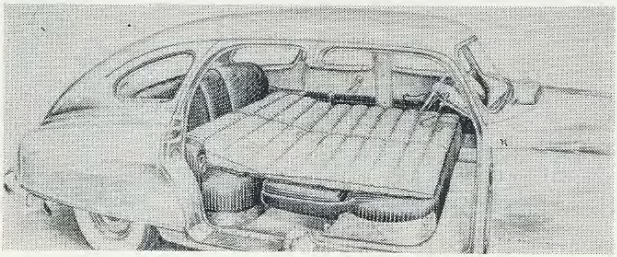
*Rear speaker is flush-mounted in the package shelf behind the rear seat. Custom brougham is shown.*

With both speakers in operation sound is evenly distributed throughout the passenger compartment.

Initially all 1949 Airflytes are equipped with dual speakers when radios are specified. Wiring for both speakers is installed in the body at the factory to facilitate dealer installation of the radio.

## THE NEW BED

Twin beds, ready instantly day or night, are available in the new Nash Airflyte two-door or four-door sedan. No more worries about sleeping accommodations, crowded hotels and packed tourists cabins. Now you're free to go wherever you like, stop where you like. You can let your fancy dictate. Now you can park beside the stream or right in the middle of the forest—make up your bed in a jiffy—and be right there when the "big ones" start biting or the game begins to run. Now you have a roomy day-couch for napping while someone drives, or for resting the children on all-day trips.



*The Nash bed for 1949 is formed entirely within the passenger compartment.*

An entirely new arrangement of cushions is utilized for the 1949 bed. Two major advantages are secured—(1) the bed can be made up more easily and (2) the trunk compartment with its usual luggage is not disturbed, as the new bed is formed entirely within the passenger compartment.

The back cushion of the front seat swings down (rearward) to fill in the space just forward of the

rear seat. A stop swings out from under the rear cushion to act as a support for the seat back. For daytime napping the seats can be folded back in a jiffy and for complete comfort at night a Kapoc-filled



*Front seat backs swing down to form a comfortable bed on three soft cushions.*

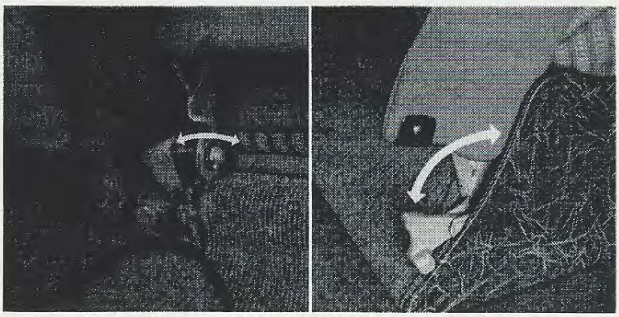
twin mattress is placed on the three horizontal cushions. The twin mattresses are stored in two attractive transparent plastic envelopes.

In 1948 and previous models only the rear seat cushion was utilized for the bed, the rest of the bed area being formed by auxiliary cushions.

In the 1949 arrangement there are no auxiliary cushions, as the three major units are converted from the two regular car seats and the front seat back.

The rear seat back is not utilized, but unlike 1948, it does not need to be swung up out of the way.

The front seat back is of the divided type when car is bed-equipped—each side is unlatched independently. This arrangement permits utilizing only the right hand side when a "single" bed is desired, while the



*Left: Two swinging brackets form stops for the seat frames at the center of the car. Right: A simple pivoted latch is used at each outside frame to permit folding seat backward. Latch is swung upward to form a stop for that seat back.*

driver continues on the road during long trips. In the case of a single occupant, this "one-side" arrangement permits utilizing the left hand side for undressing, hand luggage, and the like. The front compartment on the right hand side also is available for this purpose.

Because of the divided seats four-door sedans are ordered bed-equipped at the factory—service installation later is not practical because of the cost of the different seat assemblies and cushions required. Two

door sedans come equipped with bed-type front seats. The brougham is not adapted to bed installations.

The cushions of front and rear seats are not fully horizontal when made up as a bed, but the low areas are compensated by extra thickness of the mattress at these points. The height variation is less than one might expect, however, as the main weight of the body is carried by the horizontal central cushion formed by the swinging seat back, designed to come down to the correct angle against stops swung out from the rear seat frame. The occupants sleep with head to the rear.

In addition to the twin two-piece accessory mattress, plastic window screens are available which slip over the top of the doors. Windows can be raised or lowered without disturbing the screens.

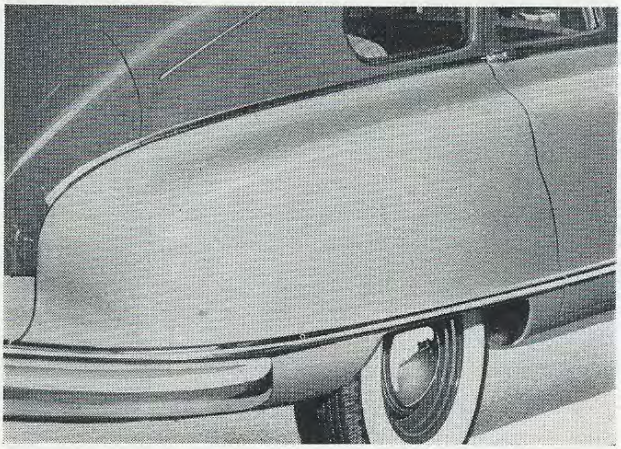
## SERVICE FEATURES

Examination of the 1949 Nash Airflyte will reveal many features which facilitate servicing. In the last decade the trend among many car manufacturers has been to sacrifice servicing and accessibility in favor of styling and economy of manufacture. In the 1949 Nash the attention paid to ease of servicing is a refreshing new approach.

With the 1949 models Nash has brought the instruments out of hiding. They are mounted on the steering post in one compact housing. That's convenient for the driver, of course, but to the servicing mechanic it means that almost any replacements or repairs to the horn controls, ignition switch, light switch, speedometer, gas gauge, oil gauge, temperature gauge, high beam headlight signal, charge indicator light or

instrument cluster lights—all can be accomplished in a sitting position on the front seat. No more handstands under the dash! Merely loosen the screw at the forward end of the Uniscope and the entire instrument cluster lifts out, exposing all wiring and instruments.

Major repairs on most cars embodying the new styling trends involve the replacement of major body sections, some parts of which may be undamaged. The 1949 Airflyte has that new "one-piece" look, yet has serviceability built into its design. Damage involving replacement of a rear fender merely calls for removing



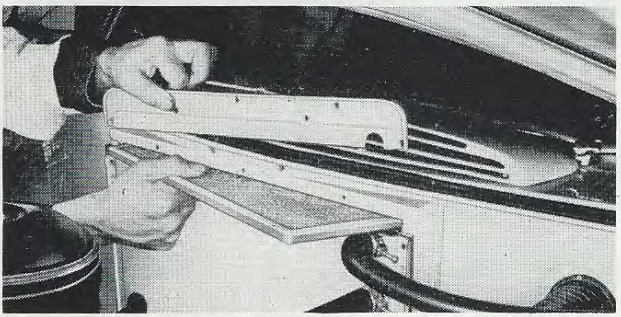
*Even the rear fender can be removed and replaced easily by a serviceman. Replacement fender bolts in place.*

a few small spot welds which are cleverly concealed under a chrome belt moulding. The replacement fender is bolted on. With even greater ease a front fender may be unbolted and removed or replaced, or

the entire front end sheet metal and grille may be lifted off the car after removing a few bolts and loosening a few brace rods.

The battery is located under the hood for ease and convenience of servicing.

One of the most talked-of Nash features of the past has been the Weather Eye, retained but further improved in the '49 series. The air filter is now removable from under the hood in a minute or two. The motors, blowers, heater core, thermostatic valve and other parts are readily accessible. Windshield wiper motor, located just under the Weather Eye unit, is far more accessible than in most cars. (See page 43.)



*Weather Eye filter is removable from engine side of dash.*

The new ball type propeller shaft steady bearing is sealed-in for life and requires no attention in service.

Consistency of design between "600" and Ambassador models has been mentioned. This has a beneficial effect by reducing service stocks. Another factor is the reduction of the number of basic designs with which the mechanic should be familiar.

## SUMMARY OF NASH AIRFLYTE BODY FEATURES

Girder-Built Unitized Body-and-Frame construction—exclusive to Nash—in both "600" and Ambassador series, is stronger, safer, lighter.

Body and frame are one strong integral unit in the Nash Airflyte.

Doors, body floors and side panels of the Nash Airflyte are treated scientifically to dampen noise-making vibrations and absorb sound waves. Added body and chassis undercoatings are not needed.

All sheet metal parts are Bonderized to provide a tenacious bond for the finish and to retard rust.

Nash Permalux enamel finish retains its lustre longer and better resists abrasion and marring.

Nash Airflyte has front seat elbow width a roomy 63 inches—rear seat 61 inches.

Nash Airflyte has the longest passenger compartment length in the industry in relation to both wheelbase and overall length.

The exclusive Nash Uniscope groups all instruments in a nacelle-shaped housing, mounted on the steering post, close to the driver's line of vision. Greater visibility and easier servicing result.

Front-hinged rear doors afford greater safety.

Nash Airflyte is first car in the industry to use a curved one-piece windshield on all models.

The famous Nash Weather-Eye Conditioned Air System is now further improved by the addition of a new pressurizing fan to provide greater efficiency at low speeds or when car is standing still.

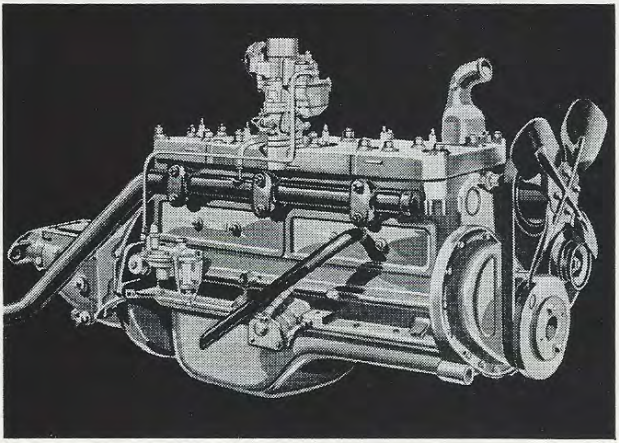
Dual speakers, in front and rear compartments, give outstanding radio reception. Large trunk compartment serves as a resonance chamber for rear speaker.

Luxurious twin beds can be made up out of seat cushions and seat backs of two-door sedans and four-door sedans. Divided seat backs permit use of one bed for napping while someone else drives, or a big double bed for restful all-night sleep. Soft mattress and Nylon window screens available at extra cost.

# ENGINE FEATURES

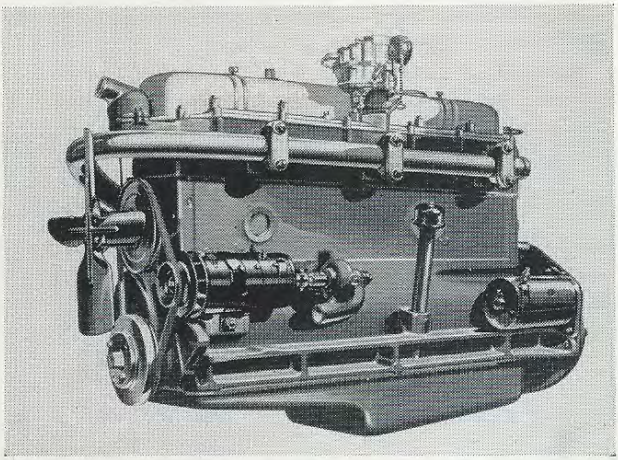
Nash cars for 1949 continue to be powered with either of two engines—the highly economical 82 horsepower L-head six in the "600," or the powerful 112 horsepower overhead valve six in the Ambassador. Detailed specifications are presented later in this Data Book, under "Specifications."

The "Flying Scot" high-economy engine in the "600" is perhaps the major reason why this car is capable of 25 or more miles to the gallon at average highway speeds. Periodic checks by the Nash engineering department insure that no design changes have been made which will reduce normal economy below this figure.



*This economical 82 h.p. L-head Flying Scot engine is used in the "600."*

*Although the two engines differ considerably in size, power and arrangement of the valves, many of the design and constructional features are basically the same for both. Hence in this discussion the features described can be assumed to be the same for both engines unless specified as applying to only one.*

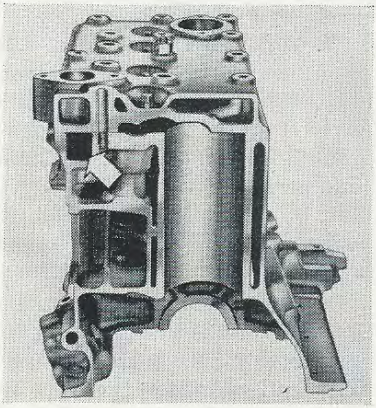


*This powerful overhead-valve powerplant is responsible for the sparkling performance of the Ambassador.*

Both engines follow best modern engineering practice but a number of exclusive features are incorporated, found only in Nash power plants. In addition there are a number of modern developments which are present in only a few of America's most highly developed automotive engines.

## SEALED-IN MANIFOLDS

Perhaps the most outstanding Nash engine feature is the Sealed-in Iso-thermal intake manifolds. In conventional construction the intake manifolds are formed



*Sectional view of "600" engine shows how intake manifolds are sealed-in, jacketed on two or more sides by hot water. Arrow points to horizontal passage of manifold.*

of separate iron castings which are bolted to the side of the engine. These manifolds serve to distribute the gasoline-air mixture from the carburetor to each individual cylinder.

In the Nash design the manifold passages are formed directly in the main engine castings. A basketful of parts has been eliminated—gaskets, studs, clamps, bolts, nuts and washers, besides the heavy manifolds themselves.

Most important, however, is the even gasoline distribution and improved temperature control made possible with the Sealed-in construction. The passages are surrounded on two sides with cooling water which

maintains a more even temperature than is possible by the use of exhaust gas alone—the conventional method. In the Nash design, exhaust gas is used only at a narrow area where the passages from the exhaust valves lead under the inlet manifold, on their way to the exhaust pipe.

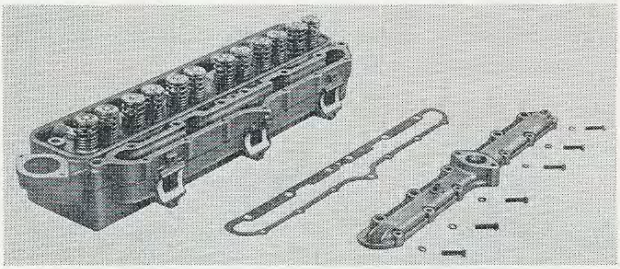
The resulting even mixture temperature not only improves warmup—it also allows use of a more efficient high compression ratio which squeezes all possible power from the gasoline without causing objectionable "ping". Higher mixture temperatures, frequently encountered when exhaust gas type of control is used, tend to cause "ping" when the accelerator pedal is pushed down. This "ping" necessitates the use of a lower, less efficient compression ratio.

Besides the improved distribution gained with the Sealed-in Iso-thermal (meaning "uniform temperature") construction, Nash engines use four-port manifolds. Each end cylinder—the ones farthest from the carburetor—are fed from individual branches while the two pairs of cylinders closest to the carburetor are supplied by branches which are joined together or "siamezed." This arrangement is unique in the industry. A few other six cylinder engines use four-port manifolds but in these the two pairs of *end* cylinders are siamezed and the remaining two, closest to the carburetor, are fed individually. In addition there are several makes of engines which are equipped with the cheaper and less efficient three-port manifolds.

The proof of this four-port sealed-in manifold is evident in car and engine performance figures. No other automotive engine produces so consistently so much power for the fuel consumed—an important

factor particularly in the "600" which at normal highway speeds will give 25 or more miles per gallon. Even the powerful Ambassador runs many more miles on each gallon than comparable cars of other makes having about the same power.

In conventional engines manifold temperature is controlled by a thermostatically operated valve which directs hot exhaust gas to or away from a "hot spot" under the inlet manifold. These valves seldom are entirely satisfactory due to the severe operating condi-



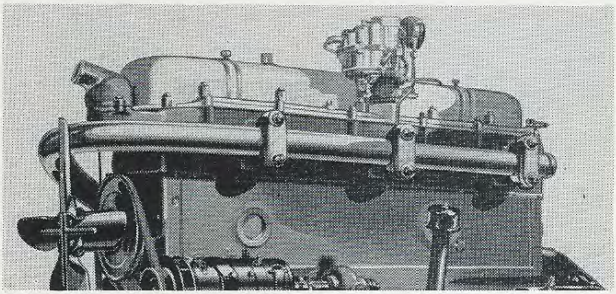
*Sealed-in intake manifold in the Ambassador is formed in the cylinder head. Cover is an aluminum casting.*

tions—they tend to stick due to corrosion at the red-hot temperatures, or to rattle if clearances are made excessive to avoid sticking. The Iso-Thermal Sealed-in manifolds eliminate the need for a heat control valve, with its tendency to either stick or rattle.

A noteworthy companion to the sealed-in intake manifolds is the simplified design of exhaust manifold. The exhaust pipe is merely clamped to the engine at three points. Three slots in the pipe register with three exhaust outlets in the engine. Being clamped gas-tight against the engine, no gaskets are required. The thin

pipe is kept at a relatively low temperature by the fan blast and there is insufficient expansion force to cause slippage and leakage at the joint. The absence of overheated sections of thick cast iron also reduces tendency of liquid gasoline in carburetor and fuel lines to boil following a high speed run.

With the intake manifolds sealed-in out of sight, and the exhaust manifolds formed by inconspicuous and neat pipes, the engines present an unusually clean appearance. At the same time the intake passages are accessible for inspection or any cleaning that may become necessary in service.



*The neat exhaust manifolds in Nash engines, and Sealed-in intake manifolds, give unusually clean exteriors.*

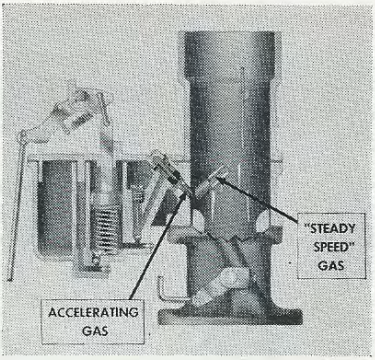
In the "600" the exhaust manifolds are bolted to the upper side of the cylinder block on the right hand side; the intake passages are formed in the block, and are sealed-in where the cylinder head is bolted on. In the overhead valve Ambassador the inlet manifold is formed in the head, being enclosed by a simple

aluminum cover to which the carburetor is bolted. Although construction details and manifold locations vary, the underlying principles are the same for both engines.

## UNIFLO-JET CARBURETORS

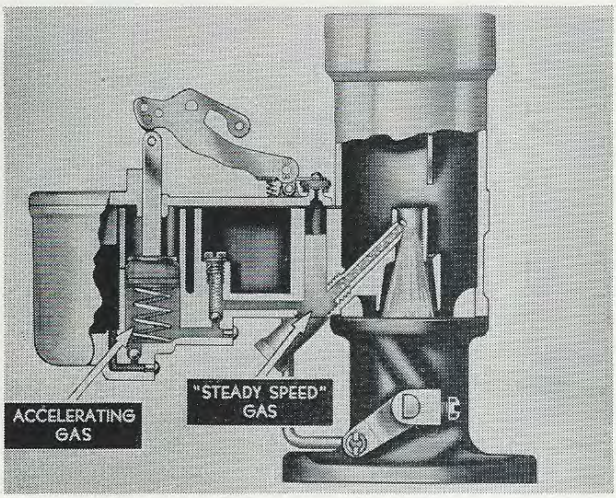
In the carburetors of both Nash 1949 engines a major change has been made which provides the "answer to an engineer's dream"—better performance

*In the conventional carburetor "accelerating" gasoline is discharged at side of main barrel. Compare this arrangement, which gives uneven mixture distribution, with the view on the next page.*




and at the same time better economy. Road tests of the engineering "Master" carburetors show that the new Uniflo-Jet design gives from 1¼ to 2½ miles per gallon better fuel economy up to 50 miles per hour. This result, obtained at steady driving speeds, is made possible by recalibrating the carburetors; the mixture no longer needs to be over-rich to cover up deficiencies in the accelerating system.

The accelerator pump, which is used in all automobile carburetors to feed extra gasoline when the driver "steps on it," now discharges into the passages between the main jet and the high speed nozzle. This arrangement smoothes out the fuel delivery more nearly in accord with engine demands, and without the abrupt shot of extra gas through a separate nozzle in the previous design. In fact, on rapid movements of the accelerator pedal, excess gasoline may pass back to the float chamber through the main metering jet, rather than be wasted as in conventional carburetors.




*This sectional view through the Uniflo-Jet carburetor shows how "accelerating" gasoline is directed into main nozzle, resulting in even distribution throughout the air stream.*

As the passages for the "high-speed" gas and for the "accelerating" gas are combined in this new Uniflo-Jet design, several modifications are needed in related parts to coordinate the over-all action. For example, a lightly loaded ball check valve is used in the discharge passages from the accelerating pump, to prevent fuel "pull-over" during steady speed operation. Such pull-over would upset metering of liquid gasoline through the main jet, and could tend to waste fuel. The extra fuel pressure created by the accelerating pump is sufficient to force this check valve from its seat, and discharge fuel through the main nozzle. At other times this check-valve isolates the two systems.

Developed at Nash by Nash engineers, this new Uniflo-Jet carburetor is simpler as it eliminates a separate jet, plug and vent. The exclusive development, covered by patent applications, is a concrete example of the technical advances made possible by the new equipment now available in the expanded Engineering Department at Kenosha.

The name "Uniflo-Jet" is derived from the arrangement of the internal passages, which in effect combine the flow from the two major metering jets.

Accelerator pedal pressure is considerably lighter than in the 1948 and previous models, due to a revised lever arrangement which gives a more desirable variable-lever return spring action. Light accelerator pedal pressure means less fatigue on long drives, as the pedal now can be held at any position almost entirely by the weight of the foot alone. Pedal travel has been increased at small throttle openings, thereby decreasing sensitivity without sacrificing either return spring effectiveness at idle or total pedal travel.

## ECONOMY

The exceptional economy of the 1949 "600" is no accident—it is the final result of an intensive search for means of obtaining the highest possible miles per gallon without sacrificing passenger comfort, riding and handling characteristics, performance, serviceability or any other important engineering characteristic.

Basically the secret is the intelligent selection and combination of a number of design characteristics that produce the highest efficiency. The use of the Unitized body-and-frame construction saves needless car weight. This, combined with a careful study of all running gear and body parts to further prune dead weight, produces the lightest possible full size car without sacrificing strength or durability. Reduced weight of the car permits use of an economical engine while still retaining all desired performance.

On top of all this, the engine has been developed and improved so that it squeezes each drop of gasoline to obtain the greatest amount of power. Use of a compression ratio higher than normal (7.0:1 as compared to the 6.7:1 average for all American cars), the super-efficient Uniflo-Jet carburetor, the Nash-exclusive sealed-in intake manifolds and the careful attention to minimized friction at the pistons, engine bearings, transmission and entire drive system—all these and more contribute to reduction of power losses from liquid fuel to push at the rear wheels.

It has been said that the Nash Flying Scot "600" "sips gasoline as delicately as a hummingbird sips nectar."

Here is America's most economical full sized car.

"THIS IS IT—THIS IS NASH"

## FUEL SYSTEM

The gasoline tank at the rear of the car holds 20 gallons—enough to drive the Nash "600" more than 500 miles on a tankful at average highway speeds.

The fuel lines in both cars are located on the side of the body opposite the exhaust system. This arrangement assures the coolest possible gasoline being delivered to the fuel pump, and reduces the possibility of "vapor lock."

A camshaft-driven fuel pump maintains constant fuel pressure at the carburetor whenever the engine is in operation. When automatic overdrive is specified a special fuel pump with built-in vacuum pump is supplied. This vacuum pump keeps the windshield wipers operating even when the accelerator pedal is pressed all the way to the floor.

## AIR CLEANERS

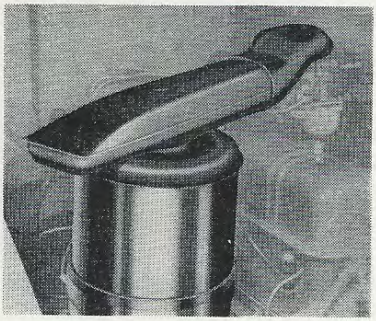
The air cleaner used on Nash engines at the carburetor inlet removes most of the abrasive dust from the incoming air. In the engine some of this dust, if



*On the "600" the air cleaner is mounted directly above the carburetor. This view shows the oil bath type.*

not removed earlier, deposits on the cylinder walls and mixes with the oil; there it acts as an abrasive compound and shortens life of the wearing parts.

In addition to its function as an air purifier, the air cleaner acts as a flame arrester in case of backfire through the carburetor. Several silencing chambers are provided in the cleaner housing which "tune out" the intake hiss and power "roar" chargeable to the



*The Ambassador oil bath air cleaner is mounted on the right of the engine, as the powerplant comes almost up to the hood.*

intermittent sucking action of the various cylinders through the valves when engine is running. These silencing chambers are specially designed to fit each engine—in fact a new cleaner had to be provided for the 1949 "600" as the 1948 cleaner, although quite satisfactory last year, was noticeably noisier in the new car.

A heavy duty oil bath air cleaner is available for both cars. These cleaners are more efficient in removing dust than the regular oil-wetted type, and the cleaning efficiency remains consistently high for longer

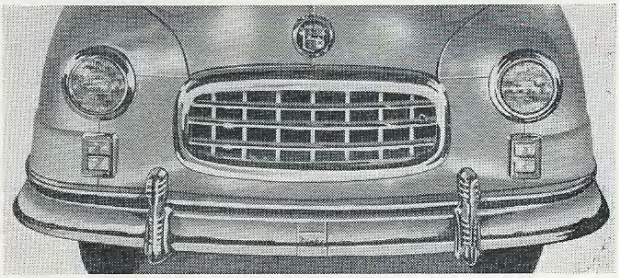
periods. Service experience indicates that the oil bath type cleaner, which has a dust-removing efficiency around 99 per cent, is a good investment under normal operating conditions to insure effective cleaning even when dusty roads are encountered but infrequently.

This type cleaner has a multi-stage scouring action. First the direction of the entering air flow is changed sharply right above a body of oil in a reservoir. Larger dust particles are immediately thrown out, to be trapped in the oil. Next the air passes through a ring of oil-coated metal mesh; the remaining dust clings to the oiled metal surfaces which are kept clean by constant circulation of oil pulled up from the reservoir. The constant flushing and re-oiling of the fine metal mesh is largely responsible for the superior scouring action of the oil bath cleaner.

## COOLING

Nash cooling systems are noteworthy for their ability to cool the engine under the hottest conditions, and for their reliability in service. The latter characteristic is largely due to several unusual design features, and to the absence of parts which frequently cause trouble.

To start at the front of the car, the beautiful radiator grille is designed with adequate consideration for its proper engineering function—to pass enough air for proper cooling. In many cars styling of the grille has restricted air flow to such an extent that



*The Airflyte grille is functional as well as beautiful—it passes ample cooling air, unlike some competitive designs.*

overheating results under adverse conditions. Here is another example of the proper attention paid by Nash engineers to functional characteristics.

The new grille permits so much more air flow than in 1948 that cooling has been improved about six degrees. In other words, what the engineers know as "air-to-boil" temperature has been raised by that amount.

Back of the grille is the radiator core, big enough in Nash cars to heat a normal size six room house on a winter day.

The "600" radiator is of the down-flow type, in which the water flows in the usual fashion from the upper tank down through many fine passages in the "core," where it gives up its heat to the air rushing through from the grille.

The Ambassador uses a "cross-flow" type radiator core. Hot water from the engine enters a top tank entirely separate from the core. From the top tank the water is directed to a vertical distributing chamber on the right hand side of the core, and then passes horizontally through the core to a similar chamber on the left side, just forward of the pump.

The top tank serves principally as an expansion chamber, so that normal expansion of the water from cold to regular operating temperature does not result in liquid loss through the overflow. The expansion tank also serves to separate air and vapor from the water before it enters the cooling passages.

Water pump is located back of the generator, about midway of the length of the cylinder block. The advantage of this location is that direct mounting on the block is possible, with the water discharging to the jacket without the need of a water distributing tube. Such tubes are needed for front-mounted pumps to control distribution of the cooling water more evenly to all cylinders. The design of the jacket is such that the water at various cylinders will vary in temperature only a few degrees. This desirable "isothermal" situation is helped by so proportioning the

passages between block and head, with the result that more water is directed to the hottest parts.

Water jackets in the cylinder block extend down the full length of the bores. This arrangement effectively controls oil temperatures as under high speed conditions the oil normally runs hotter than the cooling water. Another advantage of the full length jackets is that expansion is kept more nearly uniform throughout the length of the cylinder, with beneficial effects on valves, bearings and pistons.

A few passenger car engines are still being built with jackets extending only part way down on the cylinders. Most manufacturers, however, follow the Nash full-length jacket design.

At the cylinder head outlet a thermostatic valve blocks off the circulation until the water reaches a temperature of about 165 degrees. This arrangement provides quick warmup and maintains the engine at the most efficient operating temperature.

PRESSURE TYPE RADIATOR CAP

Loss of cooling liquid due either to boiling of alcohol solutions or to sloshing of liquid on rough roads is minimized by the use of a true pressure type cap at the radiator filler. The present cap was adopted shortly before the end of 1948 production.

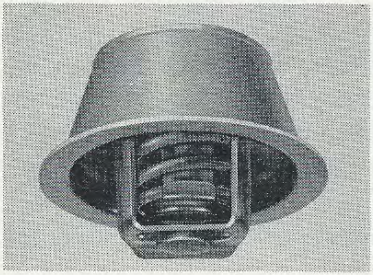
The new cap provides a sealed cooling system. A pressure of 4 pounds per square inch is required to open the seal against spring pressure. This arrangement not only prevents loss of liquid on rough roads but also raises the boiling point about 12 degrees. The overflow pipe is connected above the seal.

Previous to the adoption of this pressure cap a spring-loaded seal of similar appearance was used. This earlier cap, however, had two small fixed vent holes which were intended primarily to act as traps for liquid before it reached the overflow. Now any liquid or vapor leaving the system must pass through the main valve under pressure.

Several important changes have been adopted in the 1949 cooling system to further increase reliability, durability and accurate temperature control characteristics.

THERMOSTAT

The cooling system thermostat used in the 1949 Nash represents the first automotive use of a new design which provides better temperature control and longer life.



*New type thermostat, which uses a rugged capsule for the temperature-sensitive element, has longer life and more accurate action than the usual bellows type thermostat.*

The previous "stat" was actuated by a thin metallic bellows, which expanded when the operating temperature was reached. This expansion opened a valve which permitted water flow to the radiator. The bellows type thermostat, although used by every car

manufacturer for many years, had two major disadvantages: (1) The thin metal bellows could be easily punctured by a piece of sand or rust lodging between the convolutions as the unit was closing and (2) accurate temperature control was difficult to obtain, as under some conditions an excessive temperature would be reached before the valve opened. This latter characteristic, known as "overrun," is objectionable in winter when alcohol antifreeze is used.

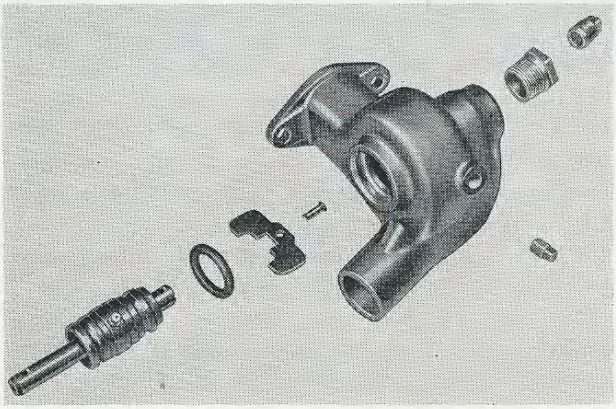
NOVEL SENSITIVE ELEMENT

The new thermostat uses for the temperature-sensitive element a capsule or piston arrangement filled with a special powder which expands on heating. This expansion in turn counteracts spring pressure and is transmitted to the valve which controls water flow. The temperature-sensitive element is unaffected by foreign particles in the cooling water, and hence cannot be put out of commission by puncturing. In addition the design is such that far more accurate temperature control is obtained than with the previous bellows thermostat.

The new sensitive element has been used extensively in automatic washing machines. Unlike the bellows type it is not affected by varying water pressures, due to sealed cooling systems. Leakage when closed is reduced due to the use of a relatively heavy spring to keep the valve tight on its seat. Sufficient pressure is exerted to crush small particles of rust or scale which could interfere with the usual "poppet valve" stat.

WATER PUMP

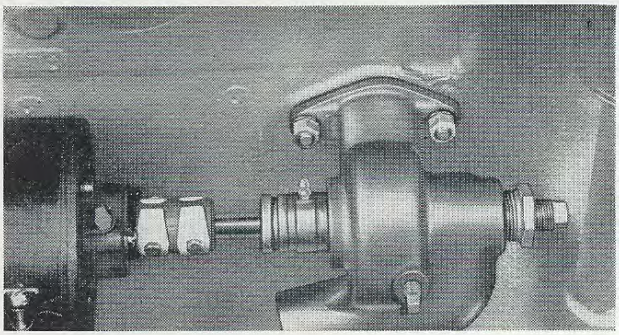
A newly developed water pump with a "packless" type seal is used on both "600" and Ambassador for 1949. The seal is of the "cartridge" construction, installed and serviced as a unit. The sealing member is enclosed in a metal cartridge which is mounted and sealed in the pump body by means of a flexible rubber ring with circular cross section. This rubber ring looks



*"Exploded" view shows major parts of Nash water pump—seal and shaft, rubber ring, impeller and housing.*

like a thin doughnut. The construction permits the entire seal and bearing cartridge to align itself to the shaft and yet withstand radial loads imposed by hydraulic forces on the impeller.

The "chevron" seal gets its name from its V-shaped cross section (like a military chevron sleeve insignia). The sealing member is pressed against the shaft by



*The Nash water pump is mounted on left side of the engine block, just back of the generator. Housing is of aluminum.*

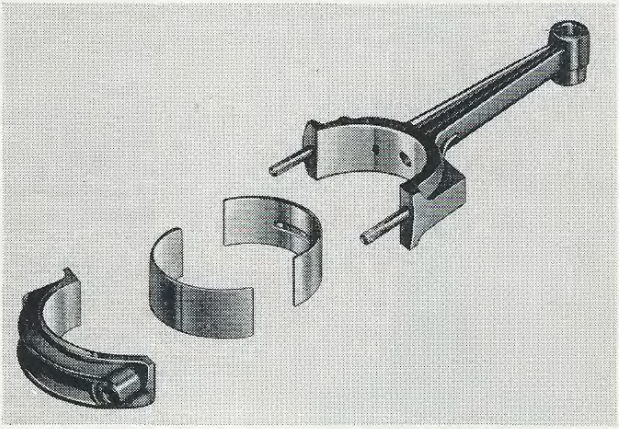
constant spring pressure exerted through bronze bushings. The spring chamber also acts as a reservoir for the lubricant. A tiny bleed hole in the reservoir prevents build-up of excessive pressure during lubrication of the seal and bushings.

This "Sealed Unit" pump is rather unique in the industry. Only one other car uses a comparable construction, and that does not include the Nash flexibly mounted feature. On accelerated dynamometer tests, the cartridge regularly withstands over 12 times the hours of operation representing maximum life of the previous "packed" type seal.

The new Sealed Unit is the final result of a long engineering investigation, studying various possible designs including most of those used on competitive cars. The self-aligning Sealed Unit cartridge type was found to be the most suitable for the Nash generator-driven pump.

## PISTONS AND CONNECTING RODS

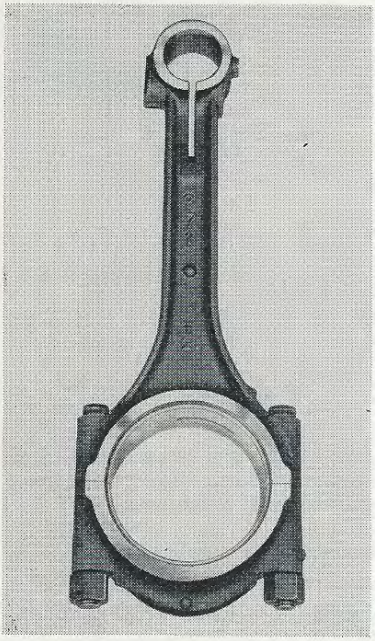
Both "600" and Ambassador engines now are equipped with 4-ring pistons, which experience has shown is the minimum number to insure low oil consumption for many thousands of miles of driving.



*Ambassador engines are equipped with full-floating piston pins. Connecting rods are drilled for pressure lubrication to the pins. Hole for cylinder wall lubrication is visible.*

For many years Ambassador engines have used full-floating piston pins and rifle-drilled connecting rods. The purpose of this lengthwise drilling of the rods is to furnish oil under pressure to the piston pin bushing at the upper end of the connecting rod. The piston pin is designed to turn in either the rod or the piston, and is held in place by small snap rings at each end.

In the 1949 "600" engine the piston pin is clamped to the rod and oscillates in the piston. With this design lubrication is supplied through holes drilled in the piston bosses. Some of the oil scraped off the cylinder walls by the lower ring passes through these holes.

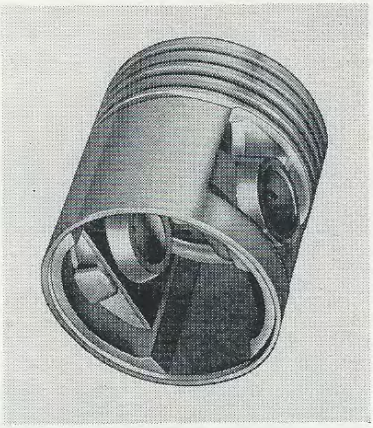


*Connecting rods in the "600" Flying Scot are split at upper ends to clamp piston pins. Clamp bolt is not shown. Boss for oil spray hole is visible at right side of rod just above crankpin bearing, and corresponding slot in bearing shell can also be seen.*

A piston having a solid skirt is used in the "600," whereas a piston with a skirt split longitudinally is used in the Ambassador. The latter type works out best with full floating piston pins, while the solid skirt

piston is best in the "600" with clamped-in-the-rod pins.

Extensive road and laboratory tests have indicated that the new rod-pin-piston arrangement in the 1949 "600" gives more satisfactory service than any of a number of other designs investigated.



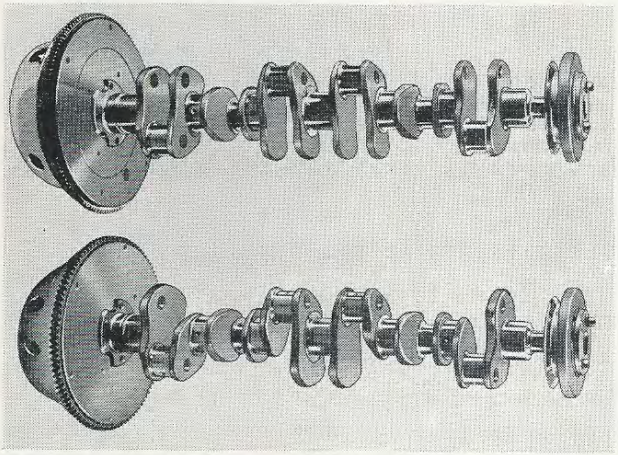
*Solid-skirt pistons are used in the "600" Flying Scot engine. Four piston rings are fitted.*

In both engines a small drilled hole at each connecting rod lower bearing directs a spray of oil to the cylinder walls. This added oil provides ample lubrication of cylinders and pistons when the engine is first started and when running at low speeds. At higher speeds the auxiliary oil spray misses the bores, as then the oil throw-off from the whirling crankshaft is sufficient for good lubrication.

## CRANKSHAFTS

The crankshaft is sometimes referred to as the "backbone" of the engine. Smoothness of operation depends to a large degree on the crankshaft design and its accuracy of manufacture.

For many years the Ambassador engine has featured a 7 bearing crankshaft—the only one of its type in American passenger cars. In this design every crankpin is supported on each side by a main bearing, thus

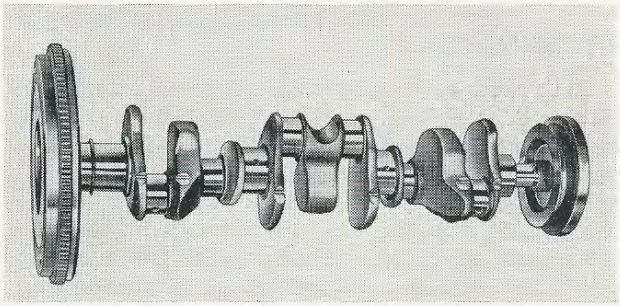


*The 1949 Ambassador crankshaft has eight counterweights (top) as compared to four in 1948 (bottom). Seven main bearings are used.*

preventing the power impulses from causing excessive "whip" or bending in the crankshaft. Reduction of vibration and noise, and less strain on the bearings are some of the benefits secured.

The Ambassador crankshaft remains a "100 per cent counterweighted" unit. However, the counterweights are now better distributed so that all bearings are benefited by an adjacent counterweight of the correct size. Previously only four counterweights were used, in place of the present eight.

Crankshaft in the 1949 "600" has been redesigned to provide greater stiffness and better counterweighting. Diameter of the crankpins (the section of



*The "600" crankshaft for 1949 is 25 per cent stiffer than previously. Crankpins are larger, cheeks thicker.*

the crankshaft surrounded by the connecting rods) is increased $\frac{7}{32}$ in., from $1\frac{7}{8}$ in. to $2\frac{3}{32}$ in. This naturally increased the diameter of the connecting rod bearings. As greater bearing area is not needed, the width has been decreased to permit thicker and stiffer cheeks between bearings. The net result is a crankshaft which is 25 per cent stiffer than in previous models. At the same time, the intermediate counterweights have been increased in size for greater smoothness and for reduction of loads on main bearings.

This 1949 Flying Scot "600" shaft is 80 per cent counterweighted, as compared with 63 per cent for 1948. This means that 80 per cent of the centrifugal forces are balanced out—forces due to the whirling crank cheeks, crankpins and connecting rod *lower* ends. With 100 per cent counterweighting as in the Ambassador engine, the main bearings are required to withstand only those loads due to gas pressure in the cylinders, the inertia forces of the pistons and connecting rod *upper* ends.

## ENGINE BEARINGS

Both main and connecting rod bearings are of the thin wall, steel back precision replaceable type. The bearing surface is formed of high quality babbitt metal, only a few thousandths of an inch thick to provide the greatest possible "back-up" strength to the working surface. The babbitt is firmly bonded to a steel back, which is accurately formed as to contour and total thickness to permit quick replacement without the need for individual fitting to obtain correct clearances. In this way bearing replacement, if needed, can be made at low cost in service and still assure as high a degree of accuracy as was obtained during initial installation at the factory.

The number of camshaft bearings in the 1949 Ambassador has been changed from six to four. Increased oil pressure on engine idle is the major advantage secured as fewer places are present where oil pressure can leak out. The new design, consistent design-wise with the "600," involves no compromise as four cams between each bearing represent modern practice; additional bearings are superfluous at the

camshaft where the loads and speeds are considerably lower than at either the main bearings or the connecting rods.

## LUBRICATION

A pressure type engine lubrication system is employed in both "600" and Ambassador engines; differences are due to the varying requirements of the two engines. For instance, in the Ambassador engine, oil under pressure is directed to the overhead valve mechanism for lubricating the rocker arm bearings. In the "600" the valve operating mechanism is exposed to oil spray in the crankcase, and auxiliary lubrication of these parts is not required.

A gear type oil pump, with output pressure controlled by a regulator valve, forces oil at about 50 pounds per square inch to:

1. Main bearings
2. Connecting rod bearings, through holes drilled in the crankshaft
3. Camshaft bearings
4. Timing chain, by means of a special pressure jet.

In the Ambassador, in addition, the piston pins and rocker arms are lubricated under pressure as previously mentioned.

All other reciprocating or rotating parts of the engine are adequately lubricated by oil thrown off the whirling crankshaft or connecting rods. The special oil spray to the cylinder walls has been mentioned (page 89). The only other spray-oiled parts

are the valve lifters and the drive for the distributor and the oil pump.

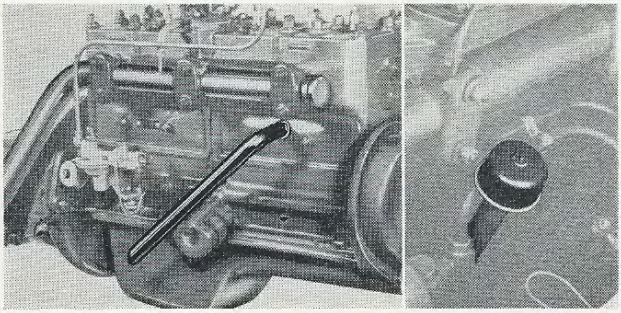
Several changes were made in the 1948 engines for improved lubrication, and these advances have been continued into the 1949 models. For example, the pumping gears were increased in length from $1\frac{1}{4}$ to $1\frac{3}{8}$ inches to increase capacity and to maintain pressures with hot oil at low engine speeds. Main bearing oil grooves were increased to a full circle, to maintain higher pressure on the drilled passages in the crankshaft leading to the connecting rods. This change also increased cylinder wall lubrication due to greater pressure at the "spit" holes in the connecting rods.

In the Ambassador the pressure regulator valve has been redesigned to improve regulation characteristics and to overcome any tendency to stick. The discharge from the valve is carried below the surface of the oil in the pan to prevent trapping air which might cause foaming.

These changes are typical of the constant study Nash engineers make of changes to improve the functioning of every part of the car. Many of these changes are put into production as soon as they are proved by road and laboratory tests, rather than defer adoption until the next model year as is often the practice.

CRANKCASE VENTILATION

All Nash engines are equipped with an effective ventilating system which expels harmful gases and water vapor—by-products of combustion—before they can combine to form acids which would etch or



*Fresh filtered air drawn through crankcase removes harmful gases and water vapor. Outlet tube is shown at left, filter-protected inlet at right.*

corrode cylinder bores, rings, timing chain or the highly polished bearing surfaces.

When the car is in motion a vacuum is created at the outlet pipe which draws off the water vapor and combustion gases before they can combine with the engine oil. This scavenging action is aided by the rotary motion of the crankshaft. To replace the gases exhausted from the crankcase, air is drawn into the crankcase on the opposite side through the oil filler which contains a small built-in air cleaner.

This system is simple yet practical, as it seldom requires attention in service other than occasional cleansing of the air cleaner at the oil filler.

OIL FILTER

The Ambassador engine is equipped with an oil filter to remove abrasive particles, suspended sludge and non-lubricative substances from the oil. If desired a filter can be obtained on the "600."

## VALVES

The "600" and Ambassador engines have different types of valves. Each is well adapted to the special requirements of the individual engine design.

Nash has used overhead valves ever since cars have been built carrying the Nash nameplate. It is only natural that this type engine, constantly improved over a period of 33 years, should be used in their highest price line.

Many advantages are gained with the valve-in-head design. The more important are:

POWER-ECONOMY

More power can be obtained from a valve-in-head engine than from any other type of equal piston displacement. This is reflected in snappy performance and excellent economy. Valve-in-head engines of the airplane type are actually more efficient—use less fuel for each horse power hour developed—than even modern Diesels.

ACCESSIBILITY

The valve-in-head engine is easy to maintain. The removable head contains all the valves and can be serviced on the workbench instead of in the car. The greater accessibility in the car afforded by the valve-in-head design also facilitates inspection and adjustment of the valve mechanism when necessary.

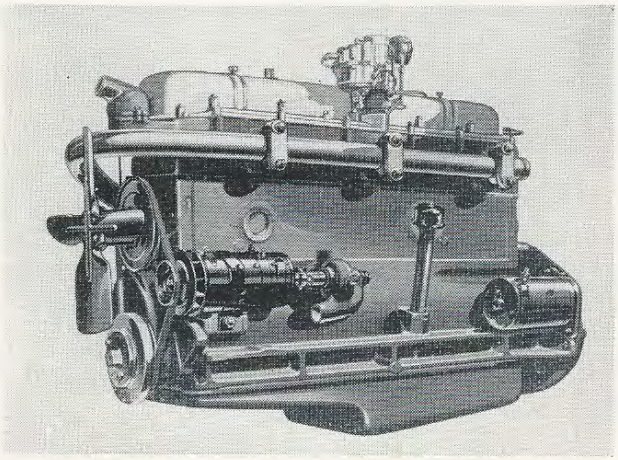
● The incoming fuel mixture travels downward all the way from the carburetor into the cylinder, rather than having to reverse its direction which disturbs its smooth flow and reduces engine efficiency. In other words, full advantage of down-draft carburetion is secured only through the intake passages in a cylinder head with overhead valves.

● The valve-in-head design is particularly efficient as applied to the Nash Ambassador engine because of the "sealed-in" intake manifolds. The absence of

bulky manifolds makes a particularly "clean" exterior.

Good valve-in-head engines are difficult to build, which is probably a major reason why more have not been used. Another reason is that relatively few valve-in-head engines are or have been quiet and reliable in service.

There are a lot of design "tricks" Nash engineers have learned about this design, with the result that engine valves in the Ambassador are fully as quiet as in a well-designed L-head engine of equivalent size. In addition the adjustment "stays put," so frequent adjustment or "lashing" is not required to keep the valves quiet or to prevent them from burning due to insufficient clearance.



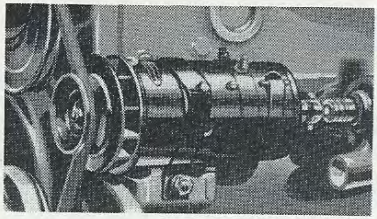
*Overhead valve engines have powered Nash-built cars for the last third of a century.*

Valve-in-head engines are returning to popularity, chiefly as the result of the growing importance of the increased efficiency that can be obtained with higher compression and higher octane fuels. One new high compression engine with overhead valves has just recently been announced. Look for several new engines of this type in the future.

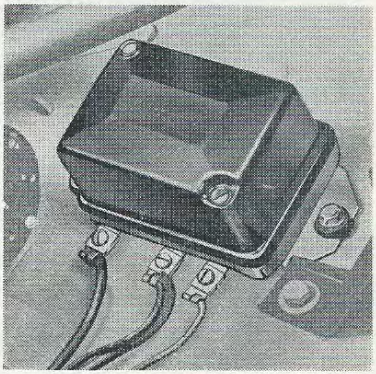
In the "600" Flying Scot engine the major engineering requirements are entirely different, and an L-head design works out best. It has been possible to avoid the major criticism of L-head valve design—inaccessibility of adjustment with modern high front fenders—with the result that the routine service work on this engine can be performed without difficulty. Compare the accessibility of the valve covers on the 1949 "600" with those of most competitive cars having L-head valves!

## ELECTRICAL

The air-cooled generators used on Nash engines are designed to deliver 34 amperes, which is more than ample to handle lights, ignition, radio and accessory requirements. The battery supplies the current only when the car is standing still or running slowly.



*Nash generators are air-cooled to permit a high charging rate for normal electrical loads.*

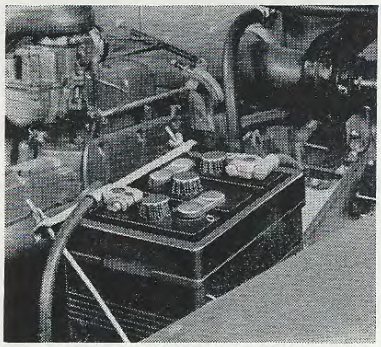


*The voltage-and-current regulator adjusts generator charge to requirements of battery and electrical system.*

Under most driving conditions all this current is not needed, so an automatic *voltage* regulator reduces generator output to just that required for the other electrical units, or to recharge the battery if needed.

By means of a *current* regulator, the generator output is maintained if needed at high car speeds. A few makes of cars still do not have this desirable feature.

Battery is located under the hood for maximum accessibility. Care has been used to place the battery in the coolest possible position, well forward at the



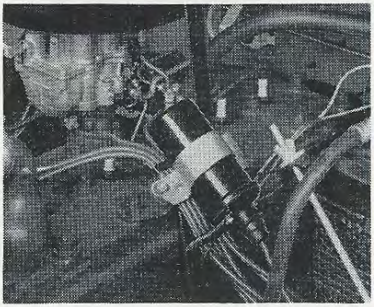
*Battery is of low-cost side-by-side cell type—a feature appreciated by motorists when replacement becomes necessary.*

left side and just back of the fan, to avoid overheating on long drives in hot weather. An ingenious hold-down arrangement is used to permit quick removal and installation of the battery if necessary.

Starter is operated by a switch actuated by the clutch pedal. This arrangement insures that while starting, the engine is disconnected from the rear wheels—a valuable safety feature. In addition the frictional "drag" of the transmission in cold weather is removed.

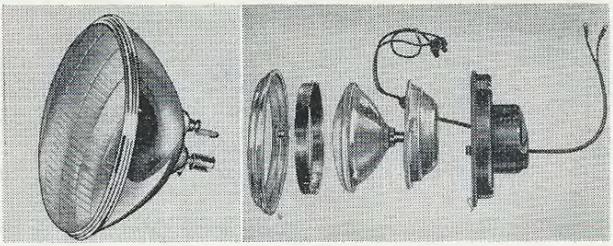
Ignition coil is now located on the engine, close to the distributor, for improved ignition performance.

The shortened high tension wire to the distributor also reduces interference in nearby radio and television receivers.



*Engine-mounted coil improves ignition and radio efficiency.*

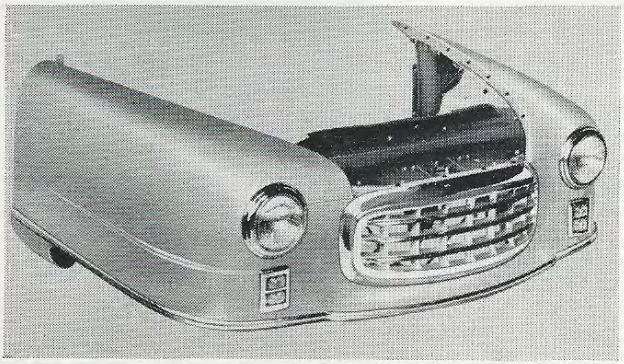
Headlights are of the sealed-beam type, which maintains brightness for the life of the filament. The sealed-beam units are prefocused at assembly. The bulb and reflector forms a single unit, sealed airtight against dust or moisture which would reduce the efficiency of the reflector. Replacement can easily be made, but with the Nash voltage regulator the original headlights frequently last for the life of the car.



*The Sealed-Beam bulb-and-reflector is central unit of the five shown at the right; enlarged view is at left.*

## ENGINE ACCESSIBILITY

Modern exterior styling in most cars has imposed severe problems for servicemen as mechanical units requiring routine service, or replacement if damaged, have become more and more hidden. This situation



*This grille-fender unit can be removed readily if extensive service on the engine ever is needed.*

has been recognized by Nash engineers, with the result that accessibility has been considered throughout the development of the Airflyte styling.

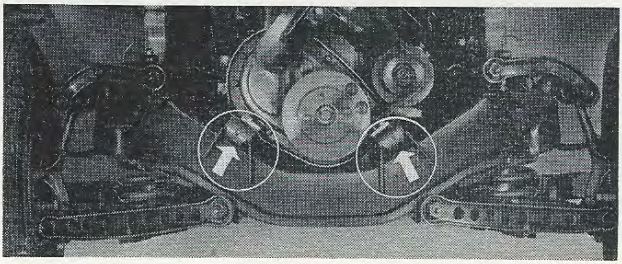
The engine compartment is unusually "clean" and well organized—compare it with other cars. All parts requiring frequent attention are handy—no need to grope around behind something else. There is plenty of space around the valve cover plates; the sealed-in manifolds are beneficial in this respect, too. Compare accessibility of the fuel pump with that of other cars. And on top of all this, if the engine or nearby parts should require more extensive service

after long use, the entire front fender and grille assembly can be lifted off as one assembly in about an hour's time!

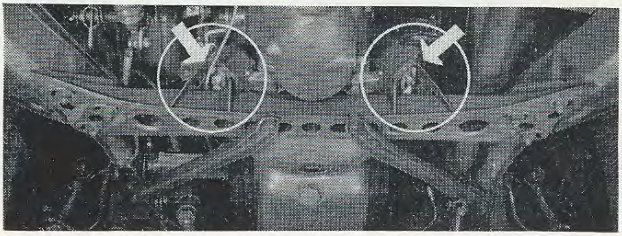
On page 62 a further discussion of service characteristics is presented, with particular attention to body features.

## ENGINE MOUNTINGS

For 1949 the engine mountings at front and rear have been redesigned to smooth out the remaining engine vibration and torque reaction, and prevent its transmission to the body. In combination with the



*Rubber four-point engine mountings are used—fronts are shown at top, and rear mountings below.*



new crankshafts, there is a very marked reduction in noise and vibration usually noticeable within the passenger compartment.

Both engines are supported by two rubber mountings at the front, and two at the rear. The front mountings rest on the front suspension cross member, while the rear is supported on a removable cross member carried by the body. Engine mountings for the "600" Flying Scot and Ambassador are similar in general design but more rubber is used in the Ambassador parts to compensate for the heavier, more powerful engine in this model.

## SUMMARY OF NASH AIRFLYTE ENGINE FEATURES

Two great engines—82 hp. six-cylinder L-head Flying Scot engine in the "600" Airflyte . . . 112 hp. six-cylinder valve-in-head engine in the Airflyte Ambassador.

Nash "600" offers economy of more than 25 miles to the gallon at average highway speed.

Nash Sealed-in Iso-Thermal intake manifolds assure even gasoline distribution and improved temperature control.

Simple exhaust manifolds, formed by extensions of the exhaust pipe, reduce engine compartment temperatures and provide a neat appearance.

Exclusive Nash Uniflo-Jet carburetion—described as an "engineer's dream"—provides better performance and greater economy.

Large 20-gallon fuel tank permits more driving between gasoline stations.

Full-length water jackets assure more uniform engine temperatures, cooler engine oil at high speeds.

Newly-designed cooling system thermostat provides better temperature control and longer life.

New Chevron-type, sealed-unit water pump gives longer pump life, freedom from periodic adjustments.

New 4-ring pistons in the Flying Scot "600" engine insure minimum oil consumption, greater durability.

Crankshafts in the 1949 Airflytes improve engine smoothness because of better counterweighting and increased stiffness.

The Nash Ambassador engine features a 7-main bearing crankshaft—the only one of its type in American passenger cars.

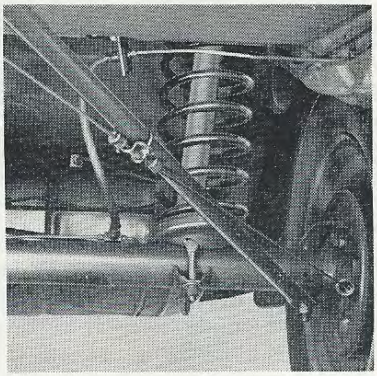
Pressure type engine lubrication is used in both "600" and Ambassador engines.

Engine mountings of rubber absorb vibration, prevent transmission of noise to body.

# RUNNING GEAR

## COIL SPRING SUSPENSION

Coil springs at the front now are used on all full sized American passenger cars, with but one exception. Nash, however, is in a more select group when coil spring *rear* suspension is considered. For it is only when coil springs are used on all *four* wheels that full advantage of these frictionless springs can be obtained.



*Coil springs at rear are designed for best efficiency in providing smooth ride. Shock absorbers are protected within spring coils.*

As compared with conventional semi-elliptic leaf springs, coils entirely eliminate the problem of interleaf friction, which is almost impossible to control within reasonable limits for long periods of service. Interleaf inserts, graphite lubricant sealed in metal covers and other means have been used to control friction, but with only mediocre success. The major practical result is that riding characteristics, even if and when good in the new car, do not remain good

after 20,000 or more miles of service. Shock absorbers cannot be calibrated to control spring action effectively if friction is allowed to vary over wide limits.

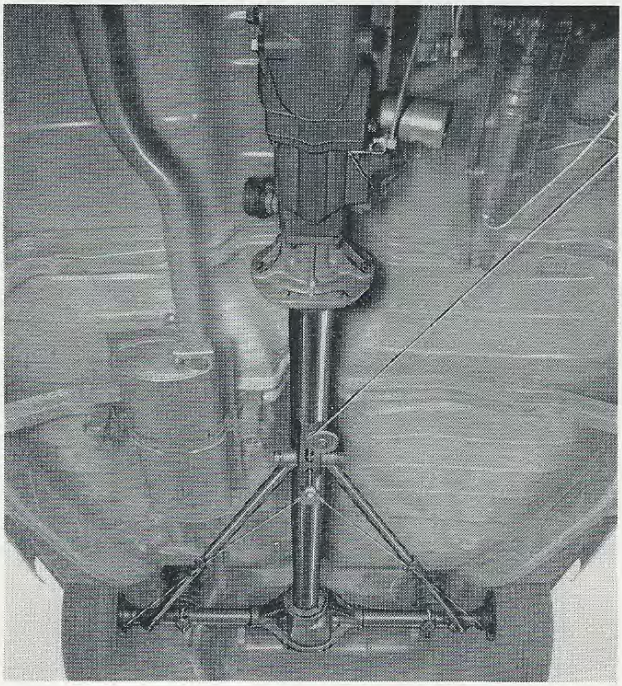
With the rear springs relieved of driving and braking loads as they are in the Nash, all four coils can be designed exactly for their major function—load carrying and bump absorbing. Leaf springs as used at the rear of other cars may need to be stiffened unduly to prevent excessive axle movement, particularly when braking.

The net result of the coil spring suspension at all four wheels is that the 1949 Airflytes have a level, comfortable ride over all roads. With the action of the frictionless coil springs controlled accurately by hydraulic shock absorbers of the direct-acting airplane type, the passengers are floated over irregular road surfaces with the most nearly perfect suspension that engineers today know how to build.

In connection with suspension, it is interesting to note that the natural rate of oscillation of the 1949 Nash cars on their springs is quite close to that to which the human body is best adapted, as the result of hundreds of thousands of years of evolution. At average walking speeds we take about 72 steps per minute, which produces the same number of up-and-down oscillations—72 per minute. (Some people walk naturally at a faster rate—80 to 85 steps per minute.) The natural rate of oscillation of the 1949 "600" front end is about 70 and the rear 82 cycles per minute. On the 1949 Ambassador the corresponding figures are 74 front and 84 rear. Corresponding data on the 1948 were 72 and 80, and on the 1948 Ambassador were 70 and 88-90.

## TORQUE TUBE DRIVE

Closely related to coil spring suspension is the type of rear axle-to-body connection used in the 1949 Airflytes, known as Torque Tube Drive.



*Torque Tube transmits drive from rear axle to engine. This is the Ambassador construction.*

The term "Torque Tube Drive" refers to that construction wherein the drive from the rear wheels is transmitted to the rest of the car through the engine.

A rigid tube, secured to the rear axle housing, extends forward to the rear of the transmission. This tube transfers rear wheel push to the engine, and as the front end is anchored, it also resists the tendency of the axle housing to twist out of position under driving or braking loads.* Because of the function of the tube in resisting axle torque (or twist), the name "Torque Tube" has been derived. The forward end of the Torque Tube tends to raise when accelerating, and to drop when brakes are applied.

In most cars these forces on the axle housing are absorbed through leaf springs which are anchored to the axle midway of their length, and to the car frame at either end. These springs then take (1) axle push when accelerating or braking, (2) axle torque (or twist), (3) sideways loads, as when turning a corner, as well as (4) the normal vertical loads due to rough roads.

This arrangement is commonly known as the hotchkiss drive. An open propeller shaft is used, provided with a universal joint at each end to accommodate the necessary freedom of axle movement. A sliding joint also is needed in the propeller shaft, to allow for lengthening and shortening as the axle housing rotates and moves up and down.

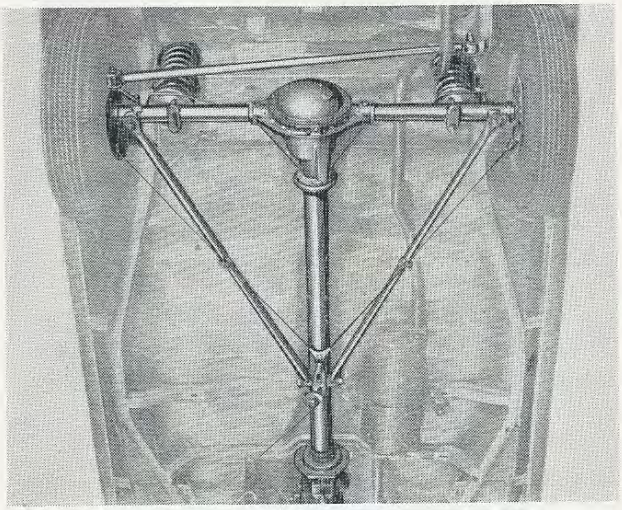
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*Tendency of the axle housing to rotate when brakes are applied is more or less obvious, as the brake shoes are anchored to the axle housing. Rotational tendency on acceleration is not quite so obvious, but it is just as real.

When power is applied to the rear wheels, the small pinion in the differential tends to "climb up" on the large ring gear with which it meshes. The pinion, driven by the propeller shaft, pushes *down* on the ring gear, but in so doing it also pushes *up* with equal force against its bearings. This upward force is transmitted through the bearings to the front side of the axle housing, thereby tending to rotate the housing in the direction opposite wheel rotation. This rotational tendency of the housing exists whether the rear wheels are standing or moving—just as long as the engine is transmitting power to the rear wheels.

The hotchkiss arrangement is supposed to cushion the drive, as the axle is free to rotate slightly, thereby absorbing shocks. This advantage is almost entirely theoretical, as smooth drive is obtained without difficulty with the Torque Tube arrangement. Likewise the tendency of two universal joints to smooth out irregular rotary motion, which is supposed to be transmitted by one joint working at an angle, is largely a theoretical argument as the relative positions required for self-compensation seldom are present.

The Nash torque tube, coil spring type construction has a number of supplementary advantages and features, of but slightly less importance than those



*Rear Axle and Torque Tube form a single rigid unit, further stiffened by rubber-mounted brace rods.*

mentioned: (A) elimination of interleaf friction and (B) freedom in designing springs for maximum riding comfort:

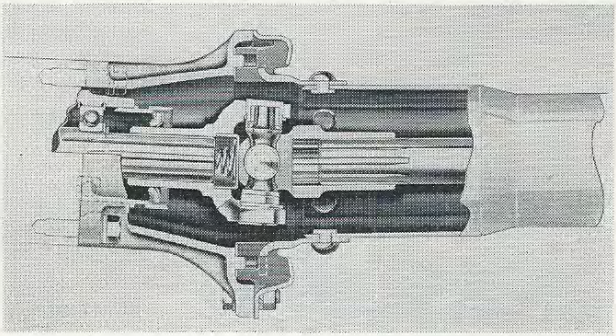
- Elimination of the rear universal joint in the propeller shaft; less mechanical complications.
- Possibility of shielding the remaining front joint from water and dirt.
- Elimination of propeller shaft unbalance and vibration due to dirt, road tar or long, unsupported rotating tube. Rotating propeller shaft in the 1949 Airflytes is housed in the stationary torque tube.
- Sliding joint in the drive line needed with hotchkiss drive has greatly reduced travel. Lubrication problem is greatly simplified when amount of horizontal travel is reduced.

The argument is sometimes advanced that the torque tube is heavy, and particularly that it adds to the unsprung weight. Careful weight analysis of the Nash and comparable hotchkiss drive constructions indicates this is not the case. Coil springs are much lighter than corresponding leaf springs (approximately 9 pounds each, compared with 34) which almost exactly compensates for the extra weight of the torque tube and a few other parts needed with the Nash design.

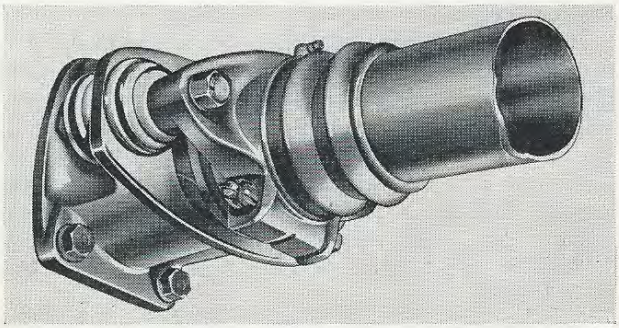
Unsprung weight also is approximately the same. The extra weight of the torque tube is balanced by the heavy center section of the usual leaf springs.

Vibrations and shock loads, originating in the axle and wheels and transmitted to the torque tube, are prevented from reaching the body. Unlike some other

constructions, rubber is used at the torque tube-to-transmission connection. The engine rear mountings further insulate noise from the body structure. The added loads due to axle torque and thrust impose no



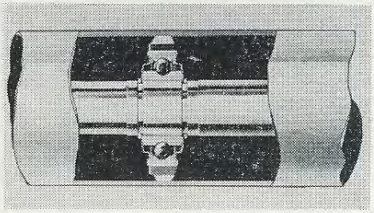
*The Ambassador Torque Tube connection at front end is rubber-insulated from the transmission. Universal joint is fully enclosed.*



*The "600" torque tube also is rubber-insulated, but in this model rubber bushings are used, to allow necessary swinging movement of torque tube.*

compromises on design of engine rear mountings.

Coil springs, torque tube drive and Unitized body-and-frame construction are a natural combination, each supplementing the other. With the main load-supporting point just back of the rear seat, it is unnecessary to provide a strong load-carrying structure at the rear end of the body, which would add considerable needless weight. With leaf springs at the rear as in most conventional cars, a heavy frame must be



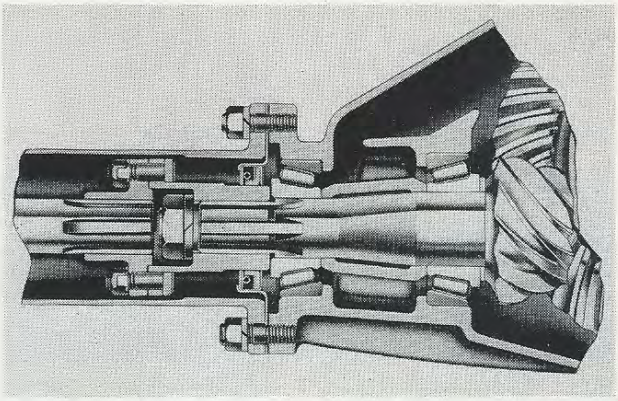
*Rubber-mounted ball type steady bearing midway of propeller shaft prevents "whip" and vibration at high speeds.*

provided all the way to the rear of the car, and strong enough to withstand the blows transmitted by the rear end of the semi-elliptic springs.

In adopting torque tube drive for the 1949 Ambassador, careful studies and tests were made on a wide range of alternate designs. As a new design of torque tube was needed to accommodate the greater power of the Ambassador engine, it was possible to provide an advanced type of torque tube-to-transmission connection. Rubber is used extensively at this point and the universal joint now is fully sealed. Rubber also is used at the juncture of the truss rods with the torque tube.

For both cars a new rubber-mounted ball bearing is used midway of the propeller shaft, replacing the previous plain bearing with accompanying lubricant

reservoir. The purpose of this bearing is to provide a "steady rest" for the propeller shaft, and to prevent



*New type connection is used on 1949 Ambassador, between propeller shaft (left) and pinion shaft in rear axle (right).*

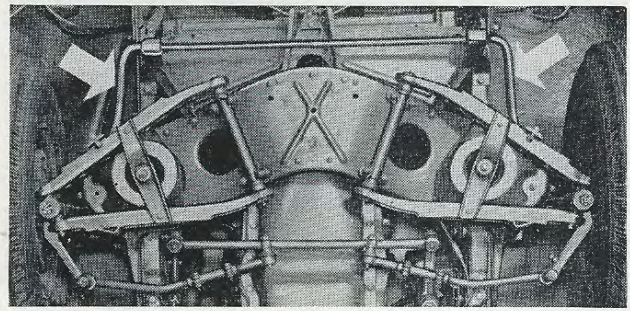
"whip" when it is whirling at high car speeds. The new bearing is sealed and lubricated-for-life, and needs no attention in normal service for the life of the car. Bearings of the same type are used on other parts of modern automobiles, where they frequently outlast the car without attention or added lubrication.

TRACK BAR, RIDE STABILIZER

With torque tube drive a simple "track bar" is used to maintain sideways alignment between axle and body. This bar, rubber-mounted at both ends for noise insulation and to avoid need for lubrication, frees the rear springs from sideways loads such as are present when the car goes around a corner. The

track bar, used on both "600" and Ambassador, is shown at the top of the illustration on page 111.

At the front of the Ambassador a ride stabilizer or "sway bar" controls the tendency of the car body to roll to the outside on turns. This stabilizer is linked to the two front suspension members in such a way that body "roll" is resisted by twisting of the bar. A ride



*"Torsional stabilizer" (shown by arrows at top) used at front suspension of Ambassador to control body "roll" on turns.*

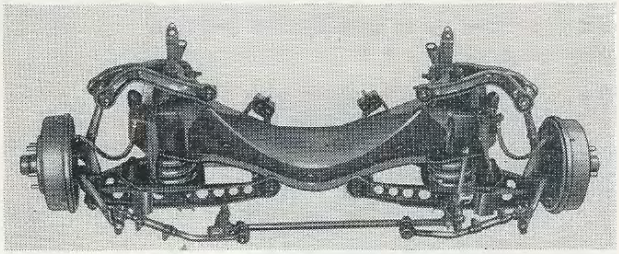
stabilizer is not used in the lighter "600" as it has proved possible in this model to control car stability by means of the springs alone.

## FRONT SUSPENSION AND STEERING

The 1949 Nash front suspension is a completely independent sub-assembly; it reduces front end unsprung weight to the minimum. This is not an untried method because the principle has been used in Nash cars for the last seven years.

A box section, pressed steel cross member forms the support for the front end suspension. Suspension links are attached to each end of this cross member with a "pantograph" geometry which accommodates the springing and shock absorber units. The front wheels can, if necessary, ride at different heights without affecting alignment or front tread.

This type of construction also allows the steering rods to be mounted so the entire front suspension and steering linkage can be accurately assembled on a fixture before it is installed in the final assembly. This insures engineering accuracy and manufacturing fidelity required by Nash engineering standards. This



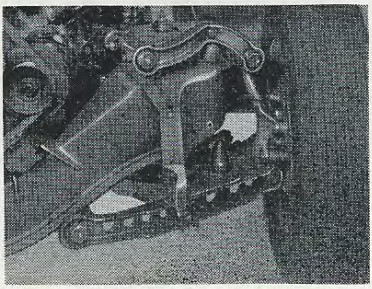
*Front suspension is carefully engineered to provide the best possible ride, steering, durability and car stability.*

whole front end suspension is attached to the Unitized body by rubber-encased bolts that insulate road noise and prevent squeaks and rattles.

While eliminating needless weight and increasing strength in the front suspension, several important additional advantages have been incorporated. The conventional king-pin has been eliminated; now a new kind of steering knuckle forms part of the geom-

etry of the front suspension. This engineering feature, which has proved so successful in the 1948 "600," is now extended to the Ambassador. Easier steering is one advantage, largely due to the wide span of the knuckle suspension points. In addition, this type of construction saves weight—in fact about 11 pounds are saved in forgings alone.

The steering knuckles are connected with the pitman arm on the steering gear in a manner which virtually eliminates road shocks to the steering wheel. Steering linkage connections are self-adjusting; the sealed ball and socket construction prevents looseness developing in the steering mechanism under normal usage. The worm and roller type steering gear is fitted with anti-friction bearings resulting in only finger-tip effort to guide the car.



*New kind of steering knuckle (right) forms part of the suspension "geometry." Entire knuckle, connecting upper and lower control arms, turns with wheels.*

The front end suspension is so designed that caster and camber adjustments can be made easily and accurately so that precision steering and wheel alignment can always be maintained. Accurate alignment is important in securing minimum wear of the front tires.

In addition the entire front suspension is sturdy enough to make the adjustments "stay put" in severe service which would soon destroy the original adjustment of many cars.

SHOCK ABSORBERS

Large two-way, direct acting, hydraulic shock absorbers are placed inside the front and rear coil springs. The "dust tubes" have been removed from the shock absorbers on both the Nash "600" and the Ambassador for 1949. This change provides the primary benefits of cooler running units, particularly in the front end, and reduces the tendency to transmit road noises to the body. On rough roads the shock absorbers have a tendency to rise in temperature because of the energy they absorb; this energy can only be dissipated as heat. With the shock absorber barrels directly exposed to the air, lower operating temperatures, longer life and less service trouble are assured.

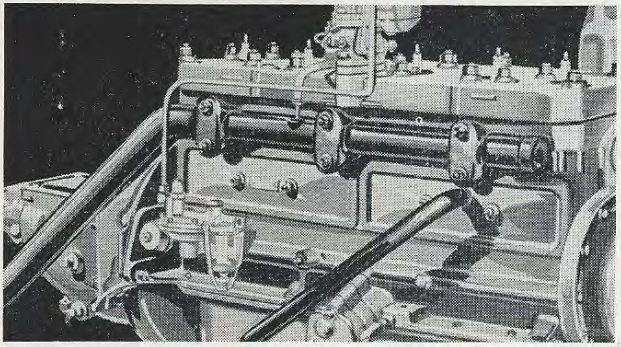
The dust tubes previously used were originally intended to keep the shock absorbers clean and to protect the barrels from objects thrown from the wheels. Tests have shown that with shock absorbers mounted inside the coil springs at both front and rear there is little likelihood of mechanical damage. The new design benefits from both better cooling and less dust.

Wheel bearings in both front and rear of the "600" were increased in size at the start of 1948 production. These higher capacity and longer-lived bearings are retained in the 1949 model.

## EXHAUST SYSTEM

Exhaust pipe in the 1949 Ambassador runs around the front of the engine to reduce tendency to overheat the equipment on the left side of the engine, such as generator, starter, steering gear, water pump and battery.

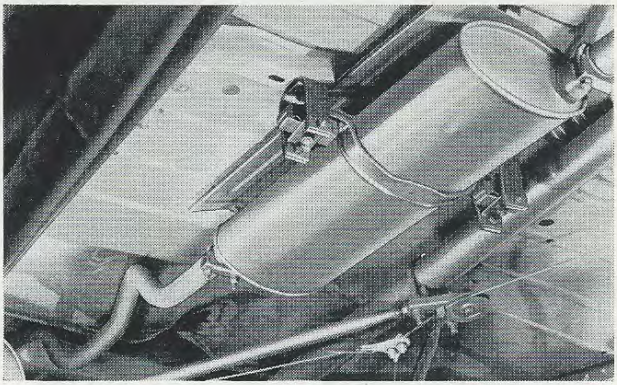
In the new "600" the exhaust pipe is shortened by eliminating the reverse bend, and leading to the muffler directly from the rear end of the section clamped to the block, rather than from the front end as in 1948. The new arrangement improves clearance with the front suspension cross member and permits use of a pipe with a relatively gradual bend for better gas flow.



*Exhaust manifold is formed by exhaust pipe bolted against the cylinder block. This shows "600" construction.*

Mufflers are of the oval type instead of the previous cylindrical construction, to make efficient use of the reduced space under the lowered body floors. The

internal construction of the mufflers remains substantially the same but exhaust back pressure on the engine has been reduced. A heat deflector above the muffler prevents excessive radiation to the metal body floor.

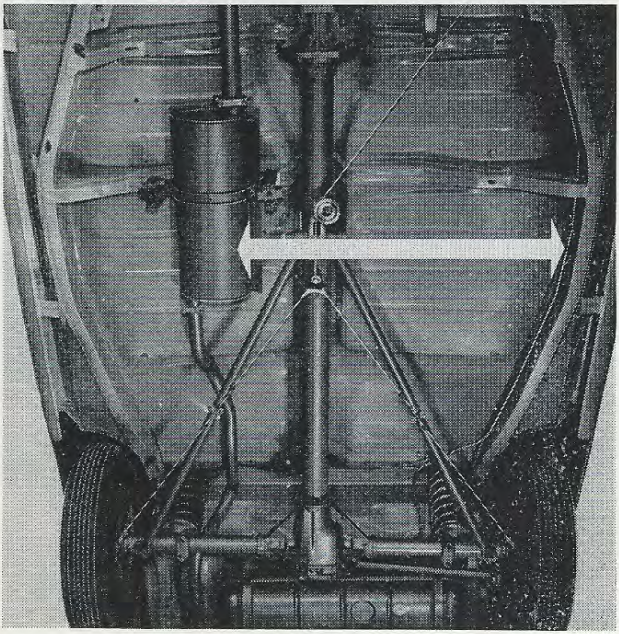


*Flexible suspension at muffler insulates exhaust system. Heat deflector keeps body floor cool.*

The muffler, heaviest part of the exhaust system, is supported from the body in a novel way by two rubberized fabric straps and two rubber insulators which prevent transmission of exhaust vibrations to the passenger compartment.

Main fuel lines in both models now are located on the left side, opposite the exhaust system. Vapor lock tendencies in extremely hot weather are reduced and the coolest possible gasoline is delivered to the

carburetor. The gasoline lines now cross over to the fuel pump at the front suspension cross member.



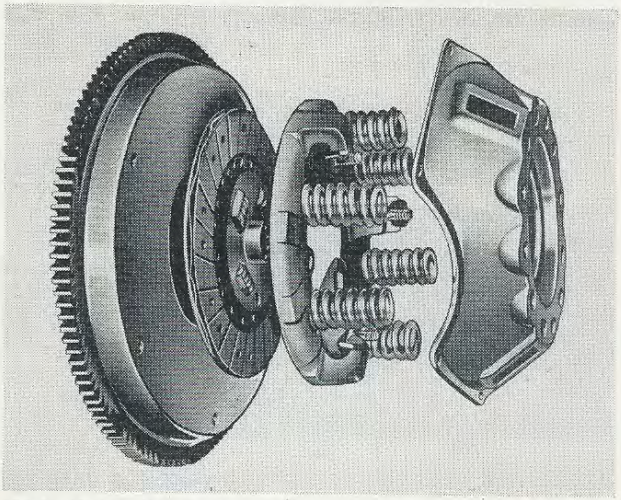
*Cool fuel line prevents "vapor lock." Nash fuel lines (one of pipes at right) are well away from hot exhaust system.*

## CLUTCH

All Nash engines are equipped with single dry disc clutches of advanced design. They incorporate features which provide soft but positive pedal action, smooth chatter-free engagement and dependable, quiet performance.

The clutch hookup on both cars is fundamentally the same as that adopted in the 1948 "600." A variable-lever return spring arrangement maintains nearly constant pedal pressure throughout its travel. A rubberized fabric strap in the beam type release lever linkage prevents transmission of engine noise to the passenger compartment. Extensive use of ball-and-socket joints reduces friction and binding. This linkage is designed to compensate for movement of the engine in its mountings relative to the body without effect on clutch action.

Alternate segments of the spring type facing support are mounted slightly out of the plane of the disc. The



*Nash clutch driven discs feature flexibly-mounted facings for smooth engagement, and anti-vibration drive springs.*

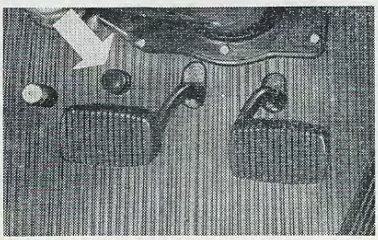
friction facings are riveted to these segments. As the clutch is engaged these spring segments are gradually compressed, bringing about a smooth engagement, free from jerking or chattering.

A series of coil springs fitted to the hub of the clutch disc cushion the drive to insure smooth, quiet operation. These springs act chiefly by damping out torsional (twisting) vibrations which in all automobile engines are produced in the crankshaft by the periodic power impulses from the pistons.

Clutches in both models feature a sealed, prelubricated ball thrust type release bearing. While more expensive than the carbon graphite type, it operates quietly and has greater durability.

## CLUTCH PEDAL STARTER

The clutch pedal starter, adopted by Nash over 13 years ago, contributes much to ease and safety of car control; it is the simplest method of engine starting



*Starter switch (see arrow) is actuated by stepping on clutch pedal. Car can not start "in gear."*

yet devised. The starter switch is operated with the clutch pedal. In starting the car all that is necessary is to turn on the ignition switch and step on the clutch

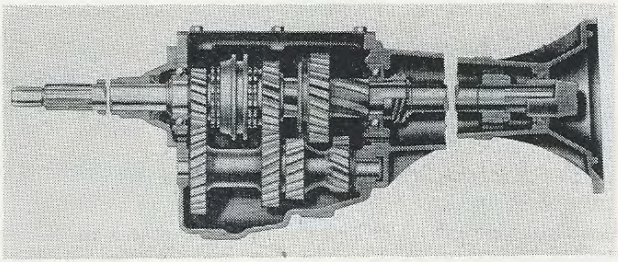
pedal. The driver has both hands free and the right foot available to operate the foot brake or accelerator.

The clutch pedal must always be depressed to start the engine, hence in cold weather the starter never has to turn over the transmission gears while the grease is stiff. This feature contributes to easy starting in winter and conserves the battery. False starts because the car has been left in gear are impossible with this safe driving arrangement.

## TRANSMISSION

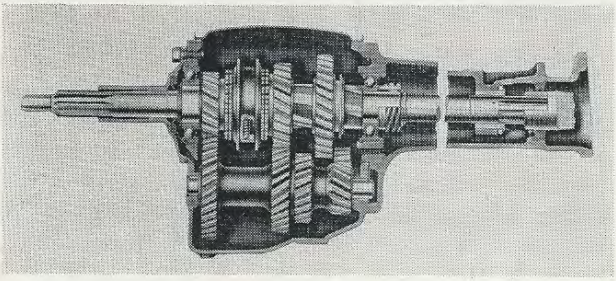
The same general types of transmissions and overdrives are continued in the 1949 Airflytes except that on the Ambassador a new model transmission is used, made by Warner.

Rear housings of the transmissions compensate for the added length of the overdrive. In other words, when the transmission is used without overdrive a longer rear housing is used to maintain the same position of the torque tube mounting, and to avoid the need for different lengths of propeller shaft and torque tubes.



*Interior of transmission used in 1949 Ambassador.*

These rear housings are aluminum castings to save weight. Different methods are used to simplify manufacture—for example the long housing (without overdrive) is a permanent mold casting, while the shorter "with overdrive" unit is a die casting. The latter saves appreciable manufacturing time as compared to an equivalent casting in iron, which would require considerable added machining.



*This Nash-built transmission is used in the "600."*

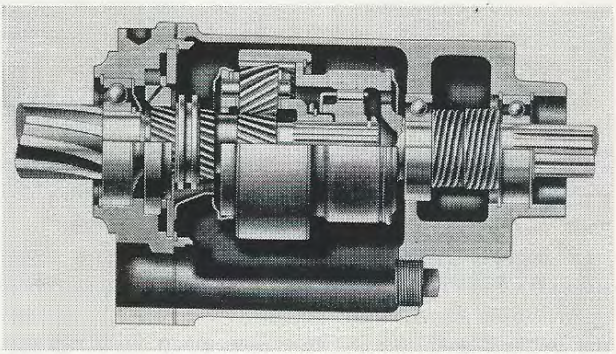
## AUTOMATIC FOURTH SPEED FORWARD

Cruising Gear

One of the most outstanding features available for the 1949 Nash is the Automatic Fourth Speed Forward (Cruising Gear) which is optional equipment on both "600" and Ambassador at extra cost.

The Automatic Fourth Speed Forward uses a simple planetary gearset mounted at the rear of the regular transmission. It is composed of (1) a sun gear about which planetary pinions revolve, (2) a clutch engaged by centrifugal force which cuts the unit in or out of

operation automatically, (3) a free-wheeling unit to permit the change in gear ratio without shock and (4) an electrically operated solenoid unit to control the automatic overtake feature.



*Interior view of Cruising Gear, showing planetary gears and free-wheeling unit.*

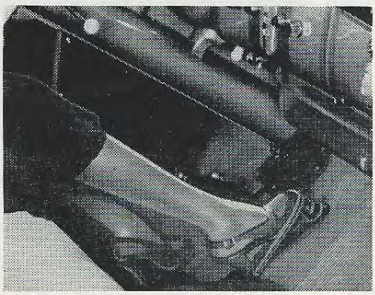
As soon as the fourth speed automatically comes into operation, engine speed is reduced 30 per cent. This lower speed provides quietness and longer life not attainable in cars having conventional three speed transmissions. It also reduces driving fatigue on long trips because of reduction in engine noise.

Saving in fuel consumption is readily understandable when it is considered that the number of engine revolutions required to drive the car a given distance are reduced 30 per cent, (or over 20 per cent as compared with a car without Fourth Speed Forward). In a car *without* Automatic Fourth Speed Forward the

engine runs 10,000 miles for every 10,000 miles of car travel, while in a car *with* Automatic Fourth Speed Forward operating, the engine travels only 8,000 miles for each 10,000 miles of car travel. As a result, the fourth speed will effect savings of 10 to 25 per cent in fuel consumption. It's like getting two gallons of gas free with every ten purchased.

## AUTOMATIC OVERTAKE

With the Automatic Overtake feature, immediate and more rapid acceleration in conventional third gear is at the instant command of the driver. It is used to overtake cars on the road quickly and safely instead of having to slow down until a long stretch of open traffic conditions permits . . . and to provide the extra power needed to climb steep hills rapidly. This feature increases ease of handling and safety and it puts a brand new thrill in driving.



*Automatic Overtake . . . by depressing accelerator to floor*

When driving at speeds above 30 miles per hour with the automatic fourth speed in operation, increased

acceleration in conventional third speed is available by depressing the accelerator all the way to the floor. The last portion of pedal travel operates a switch which cuts out the planetary gears of the fourth speed forward. The drive remains in conventional high until the foot accelerator is momentarily released again, at which time Fourth Speed Forward again engages.

Acceleration in conventional third is even greater than in a car not equipped with Fourth Speed Forward, as more powerful gearing in the rear axle is provided.

A noticeably greater pedal pressure is required beyond the wide open throttle position to cause the shift to conventional high gear.

To summarize, the Automatic Fourth Speed Forward gives an entirely different performance in six important ways compared to cars not so equipped:

- Increases operating smoothness and quietness to provide a delightful relaxed ride
- Prolongs engine life by reducing engine revolutions over 20 per cent
- Increases gasoline mileage 3 to 5 miles per gallon above 30 miles per hour
- Increases oil mileage
- Provides immediate acceleration in conventional third gear when desired
- Provides lower gear automatically for hill climbing and acceleration

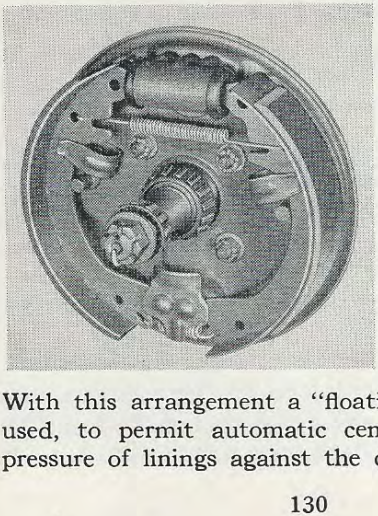
Nash was among the first to adopt this automatic overdrive or fourth speed on its higher-priced cars 13 years ago. This feature was first made available in the postwar "600" during the 1948 model year.

## HYPOID REAR AXLE

The rear axles of both cars are equipped with hypoid gears. With this construction, the pinion gear is dropped below the centerline of the ring gear which permits lowering the level of the drive shaft and torque tube. This arrangement results in lowering car height and center of gravity, at the same time permitting ample road clearance.

## BRAKES

Brakes in both "600" and Ambassador are hydraulically actuated but the arrangement of the shoes varies because of the different car weights to be stopped. In the lighter "600" a simple two-shoe design is used, with one shoe effective primarily for forward braking and the other primarily for reverse braking.

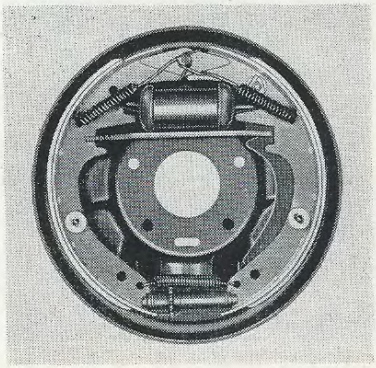


*Brake shoes in "600" are self-centering. Hydraulic cylinders are on top, shoe anchors on bottom. Front wheel bearings are of the long-lived tapered roller type.*

With this arrangement a "floating shoe" hook-up is used, to permit automatic centering and uniform pressure of linings against the drum. Brake adjust-

ments are particularly easy and simple with this construction.

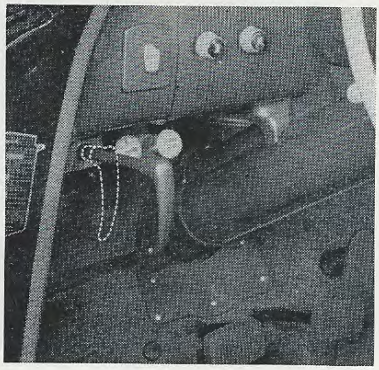
In the heavier Ambassador a so-called "Duo-Servo" system is used. The two shoes are hooked together so that one of them acts to apply the other, and thereby multiply the effectiveness of the force exerted on the pedal.



*Servo type brakes on Ambassador multiply braking effort at pedal.*

Nash employs the most practical and durable type of brake drums obtainable. Fabricated from alloy cast iron, they expand less from heat generated in stopping the car and are far less liable to distort than steel drums. As a result they provide safer and more dependable braking on long grades as there is less tendency for operating clearances to be increased due to drum expansion. They are also less apt to score—adding greatly to lining life. They have a higher co-efficient of friction and more braking action for a given pedal pressure.

All Nash cars are equipped with dependable mechanical holding brakes that operate on the rear wheels. Although the hand brake lever applies the service brake shoes on each rear wheel, otherwise it functions independently of the foot brake actuating mechanism, thus giving the car two separate and distinct braking systems.



*Hand brake pulls out from under cockpit panel—turns to release. Normal driving position is shown by dotted lines.*

Strong steel cables connect the rear wheel brake shoes with the pull-type hand brake lever which is mounted under the left edge of the cockpit panel, handy to the driver's left hand. The handle is released simply by turning it to the right, or counter-clockwise.

## TIRES

Nash was one of the first car manufacturers to adopt the new super-cushion low pressure tires, following their introduction by the tire industry in 1947. Their adoption followed extensive road testing in Nash engi-

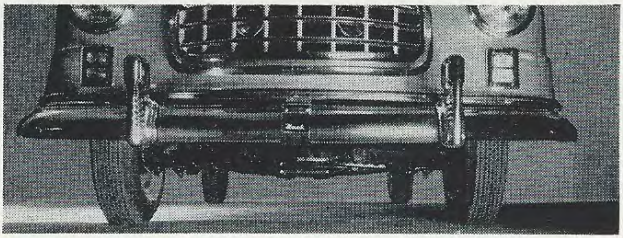
neering cars, as well as exhaustive checks made by the tire manufacturers.

To achieve the maximum benefits from the new tires, rim widths were increased to the size found best for car stability, riding characteristics and tire life. The "600" uses 6.40 x 15 tires, mounted on rims 4½ inches wide, while the Ambassador uses 7.10 x 15 tires on 5 inch rims. Inflation pressure is only 24 pounds, measured when cold.

The new tires establish unheard-of standards for riding comfort—the car seems to float over bumps with the greatest of ease. Careful measurements on all types of roads indicate that they consume no more power than the previous tires; in fact, on rough roads they actually save power.

## ROAD CLEARANCE

With the general trend toward lower and lower cars, road clearances in several post-war offerings have suffered. Instead of the eight or nine inches clearance customary 10 years ago, a number of cars



*Note absence of isolated parts protruding underneath to reduce road clearance. Nash engineers keep steering members well above minimum clearance levels.*

now have only four to six inches road clearance. These low clearances not only increase the hazard of negotiating rough roads, but also increase the chances for mechanical damage if, as is sometimes the case, the low points of the running gear are formed by steering or other easily distorted parts.

In the 1949 Airflytes, clearances have actually been *increased* as compared to 1948. The minimum clearance point is $\frac{11}{16}$ inch higher and, even more important, the low point on the 1949 cars is formed by a sturdy structural member. All steering parts are nearly an inch above this cross member just at the rear of the engine, and the engine oil pan is also well up out of the way.

Actual clearance on the 1949 "600" is $7\frac{1}{4}$ inches, measured at the two diagonal braces leading to the rear motor mounting cross member. On the Ambassador this point is about $\frac{1}{2}$ inch higher, due chiefly to the larger tires. In the 1948 "600" the center of the steering lever control arm was only $6\frac{3}{4}$ inches above the ground while the bottom of the knuckle pin, just inside the wheels, had only $6\frac{1}{2}$ inches clearance.

When comparing road clearances it is well to depend on actual measurements, rather than published figures, for some car manufacturers apparently do not hesitate to claim several more inches of clearance than actually exist.

L. H. N.

## SUMMARY OF NASH AIRFLYTE RUNNING GEAR FEATURES

Individual coil springs on all four wheels of both "600" Airflyte and Ambassador Airflyte.

Torque Tube drive on both series . . . rear springs relieved of all but load-carrying and bump-absorbing functions.

Torque tube is rubber-insulated at connection at rear of transmission. Road noises do not reach body.

Rubber-mounted ball bearing used midway of propeller shaft to prevent "whip" and noise.

Track bar on both series . . . Ride Stabilizer on Ambassador Airflyte.

Large two-way direct acting hydraulic shock absorbers inside the front and rear coil springs on both series.

Single dry disc clutch provides positive pedal action, smooth chatter-free engagement and dependable, quiet performance.

Clutch pedal starter prevents false starts when car is in gear . . . assures easy starting with less drain on battery in cold weather.

Automatic Overdrive (Fourth Speed Forward) and Automatic Overtake available on both series as optional equipment.

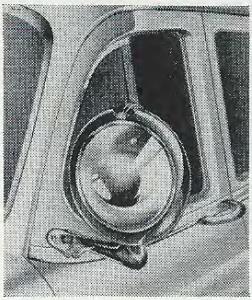
Self-centering hydraulic brakes on "600" Airflyte . . . Duo-Servo hydraulic brakes on Ambassador Airflyte.

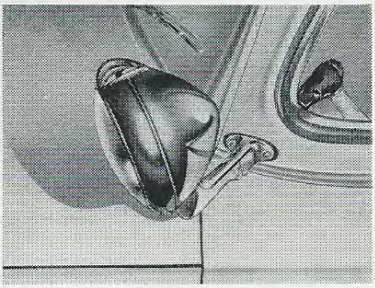
Super-Cushion tires on both series. Tire size: "600" Airflyte, 6.40 x 15, on rims 4½ inches wide. Ambassador Airflyte, 7.10 x 15 on 5 inch rims.

Exhaust system is suspended by rubberized fabric straps—muffler vibrations do not reach body.

Fuel lines deliver cool gasoline to carburetor—located on side opposite exhaust system.

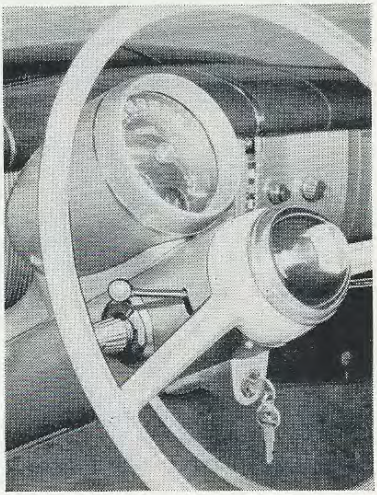
# Nash ACCESSORIES

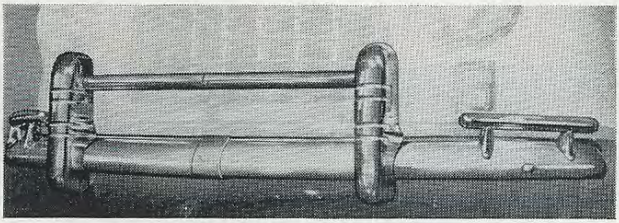




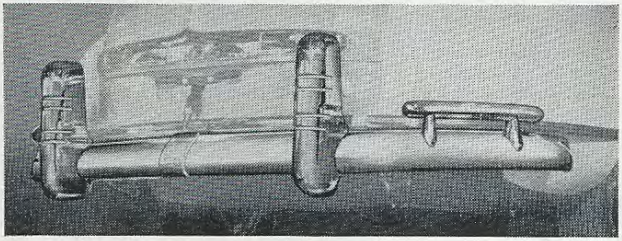
*Spotlight mounted through door frame is high enough to permit full door opening. Strength of front corner pillar of body is not affected. Sealed beam type bulb used.*

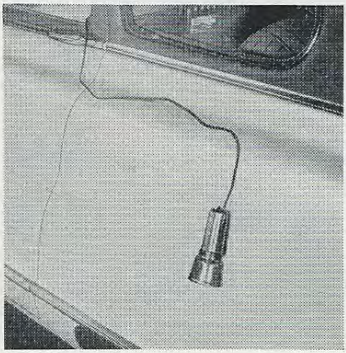
*Directional signal is part of factory-installed custom equipment, but is also available for dealer-installation. Signal light is in translucent knob on lever, which is returned to "Off" automatically by steering wheel. Wiring is factory-installed in all bodies. See Page 23 for description of exterior signal lights.*



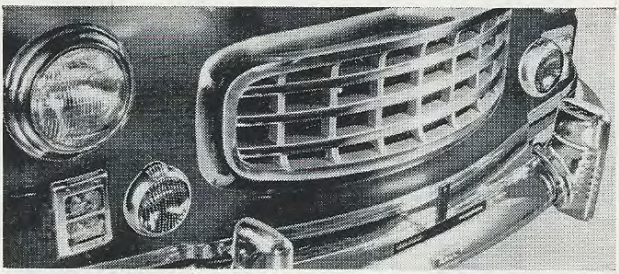


*Grille and trunk guards reduce possibility of damage to front or rear, caused by over-riding from extra high bumpers of other cars or trucks. Fender guards give added protection at outer ends of bumper.*



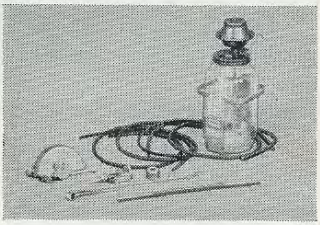


*Magnalite (trouble light) is plugged into cigarette lighter socket. Magnet in handle securely holds light on any steel or iron surface. In position shown light is handy for changing a tire at night.*

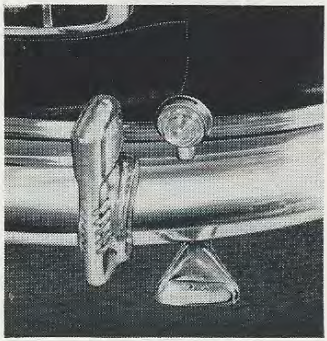


*Fog lights are installed just outside front bumper guards. Mounting is to front end sheet metal between grille and parking-direction lights. Control switch is located on auxiliary switch panel.*

*Windshield washer (at right) is a popular accessory with high utility value. Regular wiper control under cockpit panel is arranged to operate washer by turning backward from normal "Off" position. Rear window wiper is shown at left.*

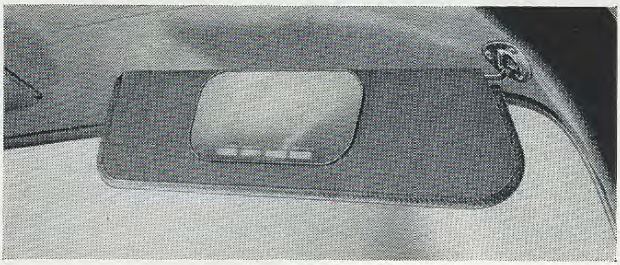


*Back-O-Matic (back-up-lights) provide illumination to rear of car. Lights are installed in pairs. Switch is actuated by gear shift linkage. Exhaust extension dresses up tail pipe.*

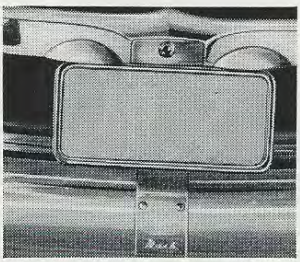




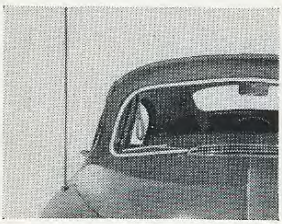
*Wheel trim rings, chrome stainless steel, "dress up" the 1949 Airflytes. Wheel discs also are available.*



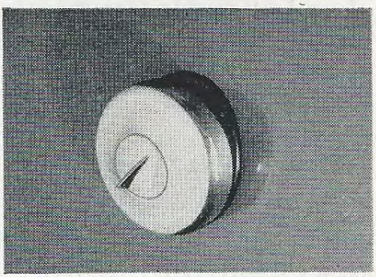
*Visor vanity mirror clips to right-hand visor.*



*License plate frames add touch of chrome at license area.*



*Radio is available with either manual or vacuum operated antenna. Installation is made in RF fender.* *See Page 57 for details of radio installation inside car.*



*This gas tank cap lock is direct key operated. Another type is available for remote control from driver's compartment.*

*The following factory-approved accessories also are available for the 1949 Airflytes.*

Seat Covers—DeLuxe Fibre or Rayon Twill.

Steering Post Clock—Mechanical Type (Replaces emblem on steering wheel).

Hood Ornament.

Snap-Up Gas Cap—Electric Type, for remote control from driver's compartment.

Parking Brake Whistle.

Tissue Dispenser (Mounts on body dash or "fire wall" under glove compartment).

Wheel Discs.

Fender Signal.

Non-Glare rear view mirror.

Outside mirror—Universal type, for either right or left.

Nash Karvisor (exterior visor, over windshield).

Auxiliary control panel. (For accessory switches; mounts under center of cockpit panel).

Weather Eye Filter.

Bed Package (Mattress in attractive transparent zipper case.)

Window Screen Package (See Page 62).

Oil Filter (Cartridge type for "600").

Fuel Filter (Skinner, porous ceramic element type).

Various cleaning compounds, and other "canned" materials such as "general use" oil, radiator sealer, cleaners and inhibitors, brake fluid, washer solvent, and anti-freeze.

Nash Airflyte

## FACTORY-INSTALLED EQUIPMENT

### "600" and Ambassador Series

**ALL BODY STYLES UNLESS OTHERWISE INDICATED**

| | SUPER | SUPER SPECIAL | CUSTOM |
|---|---|---|---|
| Arm Rest—Folding Rear Center | N.A. | N.A. | E* |
| Carpet Inserts—F. F. Mat | Std. | Std. | N.A. |
| Carpet—Front Floor | N.A. | N.A. | Std. |
| Clock—Electric | E | E | Std. |
| Cruising Gear | E | E | E |
| Directional Signals | E | E | Std. |
| Divided Front Seat Back* | E | E | E |
| Foam Cushions | E | E | Std. |
| Heavy Cushion Springs | E | E | E |
| Heavy Springs and Shocks | E | E | E |
| Lights—Courtesy Front | N.A. | Std. | Std. |
| Lights—Courtesy Rear | N.A. | N.A. | Std. |
| Oil Bath Air Cleaner | E | E | E |
| Oil Filter (Amb. only) | Std. | Std. | Std. |
| Radio—Less Antenna | E | E | E |
| Radio Antenna—Man. or Vac. | E | E | E |
| Tires, White Sidewall—4-Ply | E | E | E |
| Tires, Black Sidewall—6-Ply | E | E | E |
| Tires, White Sidewall—6-Ply | E | E | E |
| Upholstery—Leather | E | E | E |
| Weather Eye | E | E | E |

N.A.—Not Available.
Std.—Standard—No Extra Charge.
E—Extra Charge.
*—Four-Door Sedans.

The above list of equipment is subject to change without notice, due to unforeseen manufacturing and supply difficulties.

## SHIPPING WEIGHTS

Approved shipping weights on the 1949 series models as furnished to licensing agencies of the various states.

| BODY TYPE | "600" MODEL | "600" WEIGHT LBS. | AMBASSADOR MODEL | AMBASSADOR WEIGHT LBS. |
|---|---|---|---|---|
| **Super Series** | | | | |
| Two Door Brougham.... | 4943 | **2910** | 4963 | **3325** |
| Four Door Sedan..... | 4948 | **2905** | 4968 | **3320** |
| Two Door Sedan..... | 4949 | **2885** | 4969 | **3300** |
| **Super Special Series** | | | | |
| Two Door Brougham.... | 4923 | **2910** | 4993 | **3325** |
| Four Door Sedan..... | 4928 | **2905** | 4998 | **3320** |
| Two Door Sedan..... | 4929 | **2885** | 4999 | **3300** |
| **Custom Series** | | | | |
| Two Door Brougham.... | 4853 | | 4973 | **3350** |
| Four Door Sedan..... | 4958 | | 4978 | **3350** |
| Two Door Sedan..... | 4959 | | 4979 | |

These weights include spare tire and tube; tools; bumpers; oil in engine, transmission and differential; and anti-freeze solution or water in cooling system.

When cruising gear, Weather Eye, and radio are installed at the factory, the following should be added to the weight of the car:

| EQUIPMENT | WEIGHT |
|---|---|
| Cruising Gear | 50 lbs. (Both Series) |
| Weather Eye | 18 lbs. |
| Radio | 18 lbs. (Both Types of Antennae) |

# UPHOLSTERY

| MODEL | | CODE |
|---|---|---|
| | **"600" Super Series** | |
| 4943 | | T-41 |
| 4948 | | T-41 |
| 4949 | | T-41 |
| | **"600" Super Special Series** | |
| 4923 | Option | T-46, T-51*, T-66 |
| 4928 | Option | T-46, T-51, T-66 |
| 4929 | Option | T-46, T-51, T-66 |
| | **"600" Custom Series** | |
| 4953 | Option | T-76, T-77, T-78, T-79 |
| 4958 | Option | T-76, T-77, T-78, T-79 |
| 4959 | Option | T-76, T-77, T-78, T-79 |
| | **Ambassador Super Series** | |
| 4963 | Option | T-46, T-51*, T-66 |
| 4968 | Option | T-46, T-51, T-66 |
| 4969 | Option | T-46, T-51, T-66 |
| | **Ambassador Super Special Series** | |
| 4993 | Option | T-71, T-72 |
| 4998 | Option | T-71, T-72 |
| 4999 | Option | T-71, T-72 |
| | **Ambassador Custom Series** | |
| 4973 | Option | T-76, T-77, T-78, T-79 |
| 4978 | Option | T-76, T-77, T-78, T-79 |
| 4979 | Option | T-76, T-77, T-78, T-79 |

| CODE | BASIC CLOTH DESCRIPTION |
|---|---|
| T-41 | Gray Green Striped Boucle |
| T-46 | Gray Green Cloth—Brown Stripe |
| T-51* | Brown and Taupe Striped Mohair |
| T-66 | Gray Green Striped Mohair |
| T-71 | Solid Green Gray Broadcloth |
| T-72 | Solid Blue-Gray Broadcloth |
| T-76 | Brown Cloth—Gray Stripe |
| T-77 | Gray Cloth—Brown Stripe |
| T-78 | Gray Cloth—Blue Stripe |
| T-79 | Gray Cloth—Green Stripe |

| LEATHER UPHOLSTERY |
|---|
| T-56 Brown |
| T-57 Blue |
| T-59 Red |

*The T-51 Mohair was available only in the first few months of 1949 production.

## COLORS

The following single colors are optional at no additional charge on both series:

| CODE NO. | SOLID COLORS |
|---|---|
| P1 | Black |
| P2 | Marlin Blue |
| P3 | Sunset Maroon Light |
| P4 | Everglade Green Dark |
| P5 | Horizon Blue Medium |
| P6 | Ashland Green Light |
| P7 | Fawn Brown Medium |
| P8 | Nile Green Light |
| P9 | Peru Gray Light |
| P15 | Nash Ivory |
| P10 | Arlington Gray Light, was discontinued after several months production. |

Two-Tone color combinations, available at extra charge, are as follows:

| CODE NO. | TWO-TONE COMBINATIONS | |
|---|---|---|
| P8A6— | 8—Lower | Nile Green Light |
| | 6—Upper | Ashland Green Light |
| P9A12— | 9—Lower | Peru Gray Light |
| | 12—Upper | Yukon Gray Dark No. 1 |
| P5A14— | 5—Lower | Horizon Blue Medium |
| | 14—Upper | Steel Blue Dark |
| P4A11— | 4—Lower | Everglade Green Dark |
| | 11—Upper | Guiana Green Medium |
| P7A13— | 7—Lower | Fawn Brown Medium |
| | 13—Upper | Seal Brown Dark |
| P8A13— | 8—Lower | Nile Green Light |
| | 13—Upper | Seal Brown Dark |
| P15A1— | 15—Lower | Nash Ivory |
| | 1—Upper | Black |

Nash Airflyte

# HOW THE 1949 NASH AIRFLYTES COMPARE WITH AMERICA'S MOST EXPENSIVE CARS

| | Nash "600" | Nash Amb. | Cadillac 62-48 | Packard 8 | Lincoln Cos. |
|---|---|---|---|---|---|
| Overall Int. Length | 112 | 112 | 105½ | 101 | 116 |
| Wheelbase, in. | 112 | 121 | 126 | 120 | 125 |
| Overall Ext. Length | 201 | 210 | 214 | 204½ | 220 |
| Car Width, in. | 77½ | 77½ | 80¾ | 77½ | 78½ |
| Height, Overall, in. | 63 | 63½ | 65 | 65 | 62½ |
| Tread—Front | 54 11/16 | 54 11/16 | 59 | 59⅜ | 58½ |
| Tread—Rear, in. | 59 11/16 | 60½ | 63 | 60½ | 60 |
| Turning Radius | 20′ 2″ | 21′ 4″ | 20′ 1″ | 22′ | 23¼′ |
| Weight, 4-Door Sedan | 2905 | 3320 | 4165 | 3820 | 4600 |
| Engine Horsepower | 82 | 112 | 150 | 130 | 152 |
| Engine Disp., Cu. In. | 172.6 | 234.8 | 346 | 288 | 337 |
| Gas Tank, Gallons | 20 | 20 | 20 | 17 | 19½ |
| Front Seat Width, in. | 60½ | 60½ | 60½ | 56 | 60 |
| Front Elbow Room, in. | 63 | 63 | 60 | 60 | 63 |
| Front Head Room, in. | 36 | 36 | 37 | 36½ | 35 |
| Front Leg Room, in. | 41* | 41* | 41 | 42 | 41 |
| Rear Seat Width, in. | 52 | 52 | 51 | 50½ | 60 |
| Rear Elbow Room, in. | 61 | 61 | 60 | 60½ | 61 |
| Rear Head Room, in. | 35 | 35 | 35¼ | 36 | 34 |
| Rear Leg Room, in. | 40* | 40* | 39 | 39 | 39 |
| Type Chassis | Unit. | Unit. | Frame | Frame | Frame |
| Type Drive | TT | TT | H | H | H |
| Type Rear Springs | Coil | Coil | Leaf | Leaf | Leaf |

Unit.—Unitized Body-and-Frame.

TT—Torque Tube Drive—Through Engine.

H—Hotchkiss Drive—Through Rear Springs.

* After several months of 1949 production, front seat was moved back ⅞ inch to give increased knee room to tall drivers. Only items marked with an asterisk are affected. Also applies to page 147.

Nash Airflyte

# SPECIFICATIONS
# 1949 NASH AIRFLYTES

| | "600" | AMBASSADOR | UNITS |
|---|---|---|---|
| **EXTERIOR** | | | |
| Wheelbase | 112 | 121 | Inches |
| Overall Length | 201 | 210 | Inches |
| Maximum Width | 77½ | 77½ | Inches |
| Height—Empty | 63 | 63½ | Inches |
| Height—Loaded (5 pass.—800 lbs.) | 61¼ | 62 | Inches |
| Tread—Front | 54 11/16 | 54 11/16 | Inches |
| Tread—Rear | 59 11/16 | 60½ | Inches |
| Turning Radius | 20—2 | 21—4 | Ft. & In. |
| Road Clearance—Front | 7¼ | 7½ | Inches |
| Road Clearance—Rear Axle | 7¾ | 8 | Inches |
| Shipping Weight—4 Door Sedan | 2,905 | 3,320 | Pounds |
| 2 Door Sedan | 2,885 | 3,300 | Pounds |
| Brougham | 2,910 | 3,325 | Pounds |
| **BODY INTERIOR** | | | |
| Elbow Width, Front Seat | 63 | 63 | Inches |
| Elbow Width, Rear Seat | 61 | 61 | Inches |
| Cushion Width—Front | 60½ | 60½ | Inches |
| Cushion Width—Rear | 52 | 52 | Inches |
| Legroom, Front Seat | 41 to 36½ | 41 to 36½ | Inches |
| Legroom, Rear Seat | 40 to 44½ | 40 to 44½ | Inches |
| Front Seat Adjustment, Horizontal * | 4½ | 4½ | Inches |
| Front Seat Adjustment, Vertical * | 1¼ | 1¼ | Inches |
| Interior Height at Front Seat | 36 | 36 | Inches |
| Interior Height at Rear Seat | 35 | 35 | Inches |
| Depth (Fore & Aft) of Front Cushion | 18½ | 18½ | Inches |
| Depth (Fore & Aft) of Rear Cushion | 18½ | 18½ | Inches |
| Height, Front Cushion Above Floor | 12 | 12 | Inches |
| Height, Rear Cushion Above Floor | 13 | 13 | Inches |
| Steering Wheel to Front Cushion | 6 | 6 | Inches |
| Width, L.F. Pillar on Diagonal | 4 | 4 | Inches |
| Length, Windshield to Rr. Window | 112 | 112 | Inches |
| Trunk Capacity, Tire Out | 28.5 | 28.5 | Cu. Ft. |
| Trunk Capacity, Tire In | 24.4 | 24.4 | Cu. Ft. |

*See note on page 146

## 1949 SPECIFICATIONS (Continued)

| | "600" | AMBASSADOR | UNITS |
|---|---|---|---|
| **MECHANICAL** | | | |
| Front Suspension, Type | Independent Coil | Independent Coil | |
| Rear Springs, Type | Coil | Coil | |
| Shock Absorbers, Type | Direct Acting 2-Way Hyd. | Direct Acting 2-Way Hyd. | |
| Drive from Rear Axle | Torque Tube | Torque Tube | |
| Track Bar at Rear | Yes | Yes | |
| Torsional Stabilizer at Front | No | Yes | |
| Steering—Type | Worm and Roller | Worm and Roller | |
| Gear Ratio | 18.2:1 | 18.2:1 | |
| Wheel Diameter | 18 | 18 | Inches |
| Brakes, Type | Two-Shoe Self-Centering | Duo-Servo | |
| Drum Diameter | 9 | 10 | Inches |
| Lining Length per Wheel | 17½ | 22 | Inches |
| Lining Width | 2 (Forward Shoes) 1¾ (Rear Shoes) | 2 (both) | Inches |
| Lining Area | 132 | 176 | Sq. In. |
| Braking on Rear | 43.4 | 47 | Percent |
| Tires, Type | Super Cushion | Super Cushion | |
| Size | 6.40 x 15 | 7.10 x 15 | Inches |
| Rim Width | 4½ | 5 | Inches |
| Inflation Pressure, Cold | 24 | 24 | Pounds |
| Transmission, Make | Own | Warner, T-86 | |
| Overdrive | Warner | Warner | |
| Clutch Plate Diameter | 8 | 10 | Inches |
| Release Bearing, Type | Ball, Prelubricated | Ball, Prelubricated | |
| Axle Ratio—Standard | 4.4:1 (35:8) | 4.1:1 (41:10) | |
| With Overdrive | 4.9:1 (39:8) | 4.4:1 (40:9) | |
| Capacities—Fuel Tank | 20 | 20 | Gallons |
| Cooling System, with W.E. | 15 | 18 | Quarts |
| Engine Oil | 5 | 6 | Quarts |
| Transmission | 2¼ | 4 | Pints |
| Overdrive, if used | 2 | 2 | Pints |
| Rear Axle | 3 | 4 | Pints |
| Radiator Cap, Pressure to Open | 4 | 4 | Pounds |

## 1949 SPECIFICATIONS (Continued)

| | "600" | AMBASSADOR | UNITS |
|---|---|---|---|
| **ELECTRICAL** | | | |
| Battery, Size | 90 | 105 | Amp. Hrs. |
| No. of Plates | 13 | 15 | |
| Location | L. Side of Engine | L. Side of Engine | |
| Generator Charging Rate—Max. | 34 | 34 | Amps. |
| Control—Type | Volt & Curr. Reg. | Volt & Curr. Reg. | |
| Starter Control—Type | Clutch Pedal | Clutch Pedal | |
| Headlight, Type | Sealed Beam | Sealed Beam | |
| Switch Location | L. Side, St. Col. | L. Side, St. Col. | |
| Horn Location | Back of Grille | Back of Grille | |
| Distributor, Generator, Starter | Delco Remy | Delco Remy | |
| Distributor, Type | Speed Governor & Vacuum Advance | Speed Governor & Vacuum Advance | |
| Coil Location | On Engine | On Engine | |
| **ENGINE** | | | |
| Type | L-Head | Valve-in-Head | |
| No. of Cylinders | 6 | 6 | |
| Bore and Stroke | 3 1/8 x 3 3/4 | 3 3/8 x 4 3/8 | Inches |
| Displacement | 172.6 | 234.8 | Cu. In. |
| Tax Horsepower | 23.44 | 27.34 | H.P. |
| Brake Horsepower, at Speed | 82 @ 3,800 | 112 @ 3,400 | HP @ RPM |
| Maximum Torque, at Speed | 138 @ 1,600 | 208 @ 1,600 | Lb. Ft. @ RPM |
| Compression Ratio | 7.0:1 | 7.0:1 | |
| Piston Rings—Number | 4 | 4 | |
| Width Comp. Rings | 3/32 | 3/32 | Inches |
| Width Oil Rings | 5/32 | 5/32 | Inches |
| Piston Pins: | | | |
| Method of Locking | Locked in Rod | Snap Rings (float.) | |
| Pin Diameter | .8594 | .8750 | Inches |
| Lubrication, Type | Flood from Lower Rings | Pressure from Drilled Rods | |
| Connecting Rod—Length, Center to Center | 6 5/8 | 8 3/4 | Inches |
| Lower Bearing Diameter | 2 3/32 | 2 | Inches |
| Lower Bearing Length | 1 1/8 | 1 7/16 | Inches |
| Main Bearings—Number | 4 | 7 | |
| Diameter | 2 31/64 | 2 31/64 | Inches |
| Total Bearing Length | 5 3/4 | 9 3/4 | Inches |
| Crankshaft Counterweights | 5 | 8 | |
| Camshaft Drive, Type | Chain | Chain | |
| Width and Pitch | 9/16 x 3/8 | 9/16 x 3/8 | Inches |

### 1949 SPECIFICATIONS (Continued)

| | "600" | AMBASSADOR | UNITS |
|---|---|---|---|
| **ENGINE (Continued)** | | | |
| Full Length Water Jackets | Yes | Yes | |
| Fan Diameter | 14 | 16½ | Inches |
| Oil Filter | Optional | Standard | |
| Carburetor, Type | Uniflo-Jet | Uniflo-Jet | |
| Make and Model | Carter WA1 694S | Carter WA1 683S | |
| Choke | Automatic | Automatic | |
| Fast Idle | Automatic | Automatic | |
| Intake Manifolds, Type | Iso-Thermal Sealed-In | Iso-Thermal Sealed-In | |

The specifications above and on preceding pages are subject to change without notice, as it is Nash policy to adopt improvements as soon as they are proved by engineering tests.

## LICENSE SPECIFICATIONS

| | "600" | AMBASSADOR |
|---|---|---|
| Wheelbase | 112 in. | 121 in. |
| No. of Cylinders | 6 | 6 |
| Bore and Stroke | 3⅛ x 3¾ in. | 3⅜ x 4⅜ in. |
| Cu. In. Displacement | 172.6 cu. in. | 234.8 cu. in. |
| Tax H.P. | 23.44 | 27.34 |
| Shipping Weights | See Individual Model, page 143. | |

### STARTING SERIAL AND MOTOR NUMBERS—1949 SERIES

| | "600" | AMBASSADOR |
|---|---|---|
| Serial No. | Kenosha K 260501<br>El Segundo KC 1001 | Kenosha R 515501<br>El Segundo RC 1001 |
| Motor No. | S-1001 | A-1001 |

Location, both series

Serial Number: Under hood, right side, on upper face of RH body extension.

Motor Number: On engine cylinder block, right hand side.

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