



# **ENGINEERING FEATURES**

## **PASSENGER CARS**

**CHEVROLET**  
**1953**  
**ENGINEERING FEATURES**  
*PASSENGER CARS*

BOOK NO. \_\_\_\_\_

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## FOREWORD

In this word and picture story of the 1953 passenger cars, we are pleased to present the many new features that make the model year a notable one in the history of Chevrolet products.

With increased power output, the engineering objectives of faster take-off and more lively mid-range acceleration, together with improved fuel economy, have been attained. Better passing ability, which provides additional safety and more pleasurable driving in highway operation, combines with a smoother, more level ride to make the 1953 Chevrolet an outstanding road car.

Design factors in this better car performance are: increased engine displacement for the basic car along with a lower axle ratio; higher engine compression ratios; and an automatic shift in the new Powerglide transmission. New to Chevrolet design, the engine used with Powerglide has aluminum pistons and full pressure lubrication.

Power steering is available on all models, recording another first for Chevrolet in its field. Key-turn starting and one-piece windshields on all passenger cars are among other changes which mark the current line with more than usual significance.

In appearance, the modern, functional lines of the 1953 cars surpass in beauty anything that has gone before. The more extensive use of wrap-around rear windows, and many other features too numerous to summarize, maintain the standards of styling the public has learned to expect from Chevrolet.

With sixteen models available, there is a wide choice of body styles and equipment. Station wagons with a flush-folding rear seat are a feature of the 1953 line. The new series of cars, pioneered by 1950's Bel Air Coupe, is the most luxurious we have ever produced.

We trust these pages will help to acquaint you with the new Chevrolet car, and prove to be a useful volume for reference.



E. N. Cole  
Chief Engineer

**BEL AIR 4-DOOR SEDAN**



## 1953 SERIES AND MODELS

In a versatile array of sixteen models divided into three series, Chevrolet introduces a completely new car for 1953.

Every model in the line-up is unmistakably identified by the advanced lines of the 1953 styling. As before, the individual series are distinguished by important differences in regular equipment and trim. This year, with the inauguration of a "luxury" line, the Bel Air, a new series is created to meet the requirements of the customer who demands a more exclusive appearance.

Series 2100 and 1500 are continued, so with the addition of the new Bel Air or 2400 Series, there are three lines of passenger cars in place of the former two. Because the name, Bel Air, now applies to a series instead of an individual model, changes in the body style nomenclature have been made. The hard-top coupe style is now known as the Sport Coupe rather than the Bel Air Coupe, and the former Sport Coupe, the six-passenger, notch-back coupe, is designated the Club Coupe. Departing from the titles used in the past four model years, Series 2100 and 1500 are renamed Two-Ten and One-Fifty from De Luxe and Special, respectively. The differences in regular equipment which distinguish the two series, however, remain essentially the same.

The four models in the Bel Air Series are set apart by a luxurious appearance, numerous refinements of exterior beauty, and lavishly appointed interiors. The Series comprises: a Four-door and Two-door Sedan, Sport Coupe, and Convertible.

The seven models of the Two-Ten Series include: Convertible, Sport Coupe, Four-door and Two-door Sedan, Club Coupe, eight-passenger station wagon, and a new six-passenger station wagon. The station wagons, which are of a four-door design, differ principally in the interior arrangement. The eight-passenger model, the Townsman, provides three seats as in the 1952 model, while the six-passenger model, the Handyman, features greater utility with a single, folding rear seat in place of the intermediate and rear seats of the eight-passenger style.

The addition of the new four-door, six-passenger, Handyman station wagon to the One-Fifty Series extends the selection of models offered in this line. Similar to the Two-Ten Handyman, it differs in that only basic equipment is provided as in the other One-Fifty models. The body styles continued in the One-Fifty Series are: Four-door and Two-door Sedans, Club Coupe, and Business Coupe.

With sixteen models available in the three lines, the customer is able to satisfy a wide variety of individual needs in 1953. In the extended model range, there is a choice of two Sport Coupes and two Convertibles, since these two body styles are offered in both the Bel Air and the Two-Ten series. With the new Handyman, a station wagon is available in the One-Fifty series.

### ONE-FIFTY SERIES

Five utility models

1503



FOUR-DOOR SEDAN 6-PASSENGER

1502



TWO-DOOR SEDAN 6-PASSENGER

1524



CLUB COUPE 6-PASSENGER

1504



BUSINESS COUPE 3-PASSENGER

1509



HANDYMAN 6-PASSENGER

**Three Series . . . Sixteen Models . . . Eight Body Styles . . .**

**TWO-TEN SERIES**

Seven deluxe models

**2103**



**FOUR-DOOR SEDAN 6-PASSENGER**

**2102**



**TWO-DOOR SEDAN 6-PASSENGER**

**2124**



**CLUB COUPE 6-PASSENGER**

**2154**



**SPORT COUPE 6-PASSENGER**

**2134**



**CONVERTIBLE 5-PASSENGER**

**2109**



**HANDYMAN 6-PASSENGER**

**2119**



**TOWNSMAN 8-PASSENGER**

**BEL AIR SERIES**

Four luxury models

**2403**



**FOUR-DOOR SEDAN 6-PASSENGER**

**2402**



**TWO-DOOR SEDAN 6-PASSENGER**

**2454**



**SPORT COUPE 6-PASSENGER**

**2434**



**CONVERTIBLE 5-PASSENGER**



### EXTERIOR STYLING New Beauty Distinguishes 1953 Exteriors

Completely new, the 1953 Chevrolet embodies the beauty of functional design in every detail of its brilliant contemporary styling.

The silhouette is lower, the overall height having been reduced as much as 1/2 inch in many of the models. Outstanding, however, is the instant impression created by the new car is its fleet appearance and the suggestion of greater length achieved through dynamic treatment of body lines and sheet metal.

Smooth, flowing lines identify the new contour. The hood preserves the natural elegance of Chevrolet design in previous models but the top line is carried forward approximately one inch and curves down more steeply to the radiator grille. Fender lines are gracefully extended front and rear, ef-

fectively emphasizing the car's apparent length. A distinctive feature of the front and sheet metal is the continuation of the flat top line of the front fenders to the leading edge of the headlight bezels which are slightly elliptical. An embossed wind-split line running rearward from the lights still further accentuates length in the front fenders. The rear edge of the wheel opening sweeps back instead of following the wheel shape.

The nose of the rear fenders extends in a streamlined sweep beyond the rear door centerline while the top line glides almost horizontally to the rear to match the new rear deck lid styling. In keeping with the longer contours of the 1953 exterior, the top line of the rear deck lid is almost horizontal and curves abruptly downward at the rear. In ad-

dition to the obvious styling advantage, the arc of the new rear deck lid provides a substantial increase in usable luggage space. The bottom of the larger opening is nearly flush with the compartment floor, making for easier loading.

Despite its longer appearance, the new car is actually two inches shorter in overall length than its 1952 predecessor as a result of design change which permits the distance from the wheel centerline to the bumper ends to be decreased. Parking is now easier and front and rear overhang considerably reduced.

Viewed from the front, the new Chevrolet presents an appearance of broad strength with the front of the hood and fenders blending smoothly with the headlights and radiator grille. Wide-based, powerful, and basically simple in design, the new radiator grille emphasizes the low, wide proportions of the

front of the car. The generous use of bright metal, expressed in cleanly cut, functional lines, creates a commanding and distinctive front end.

Exterior colors match in beauty and individuality the new appearance of the 1953 models. Fourteen basic colors again are offered, and, of these, all except four are new. Variety is extended in the two-tone combinations for many models.

Among the many new features of the 1953 exterior illustrated in the following pages are: a one-piece curved windshield on all models; new exterior body trim; new parking lights and tail lights; and new bumpers and bumper guards. As there are three series to be considered, the descriptions that follow are based upon the Two-Ten Four-door Sedan for the sake of simplicity. The Bel Air and One-Fifty Series are considered separately at the end of the exterior styling chapter.



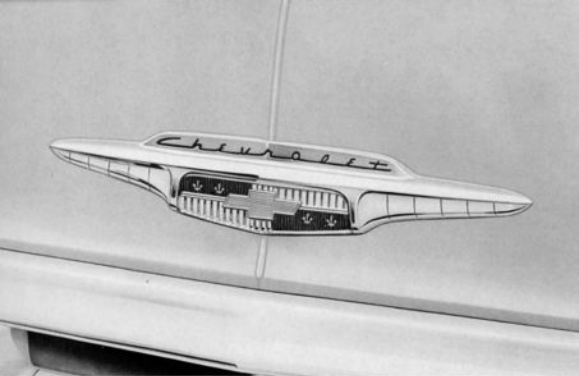
**TWO-TEN 4-DOOR SEDAN**





**RADIATOR GRILLE . . .**

The new radiator grille emphasizes the low, wide proportions of the front of the car. Three horizontal bars dominate the grille design. The upper and lower bars are blended together in semi-circles at the ends while the ends of the center bar form rings for retaining the parking lights. The bumpers and bumper guards are new and the front license guard is eliminated.



#### HOOD EMBLEM . . .

The colorful hood emblem contains the Chevrolet name in script above the trademark which is set within a jewel-like plastic insert shield. The trademark is blue; the shield colors are red and white.



#### HOOD ORNAMENT . . .

Narrower and longer delta-shaped wings extending all the way back to the rear of the ornament accent the longer hood line.

#### **PARKING LIGHT . . .**

The parking lights are a distinctive feature of the styling. Circular in shape and concentric with the circular ends of the center horizontal grille bar, they add grace to the strong lines of the radiator grille. A panel of bright metal with a series of horizontal, embossed ribs, extends the rounded corners of the grille to the outside edge of the fenders. The headlight bezels have a new shape to blend with the fenders.



#### **FRONT FENDER . . .**

The flat top line extends forward to the leading edge of the headlight bezel. An embossed wind-split line extends rearward from the headlight to accent the long, horizontal fender lines. The rear edge of the wheel opening is swept rearward rather than following the wheel shape. A straight, spear-type bright metal molding, extending along the side of the fender just above the wheel opening, is continued almost to the end of the rear fender. The sill moldings are bright metal strips along the bottom of the rocker panel as before.

#### **WINDSHIELD . . .**

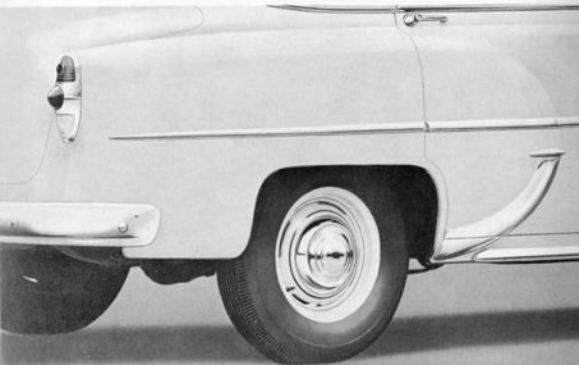
A curved, one-piece windshield provides unobstructed visibility on all models. The windshield is framed by a bright metal reveal molding in the De Luxe and Bel Air Series.





**SIDE WINDOW MOLDINGS . . .**

The side window reveal molding follows the roof line and sweeps beyond the rear door to blend with the rear window. The door has a new vertical line at the rear, above the belt.





#### **WRAP-AROUND REAR WINDOW . . .**

One-piece, wrap-around rear windows on the sedans in the Two-Ten Series feature increased visibility and an open appearance. The rear window area is 41 per cent greater, or 904 square inches as against the previous 640. The Sport Coupe, also, has a one-piece rear window, the dividing bars having been removed. In the Club Coupe, the conventional one-piece rear window is four inches wider than before. All are of solid plate, safety glass and are surrounded by a bright metal molding.

#### **REAR FENDER . . .**

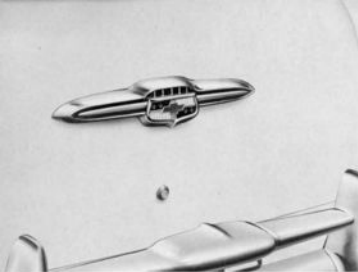
The leading edge extends farther forward and the top line flows almost horizontally to the rear to match the new rear deck lid styling. The crown is narrower than in 1952 and there is a slight extension at the end to form a pad for the tail light.



#### **REAR DECK LID . . .**

The new contour of the rear deck lid balances the symmetry of hood and fender lines. The top line is almost horizontal and curves down abruptly to form a larger opening and to provide a valuable increase in usable luggage space. The depth of the lower back panel below the lid is 4-1/2 inches less, making the bottom of the opening nearly flush with the floor for easier loading. The license plate is now attached to a chrome-plated steel guard which extends between the bumper guards. The license light directs light downward on the license plate and, in its new position on the license guard, is less likely to be covered with snow.



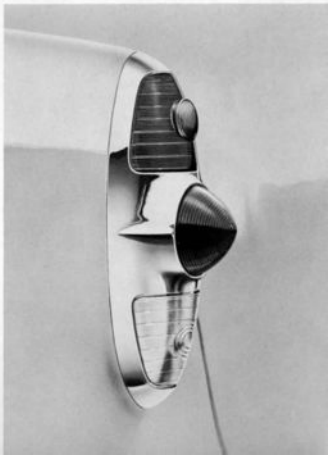


#### DECK LID HANDLE . . .

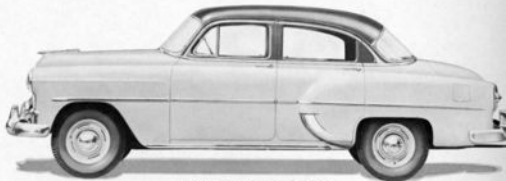
New in design, the deck lid handle is a long, horizontal emblem. The trademark, centered on an ornamental shield, repeats the design of the hood emblem in the same jewel-like plastic. An improved finger grip is provided on the underside of the shield and wings.

#### TAIL AND STOPLIGHT . . .

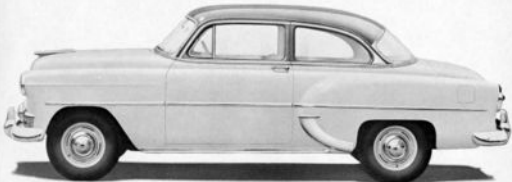
Integrated with the rear of the fenders, the tail and stop lights are a striking example of the continuity of line which distinguishes the new styling. The unit is divided into three sections: the upper section contains the tail light and includes the reflex button; the bullet-shaped lens in the center houses the stop light and accessory direction signal light; the lower is white glass for accessory back-up lights. The new tail and stop light design has the practical advantage of being easier to see from the side.



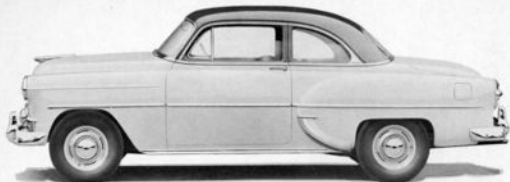
**MODELS OF THE TWO-TEN SERIES . . .**



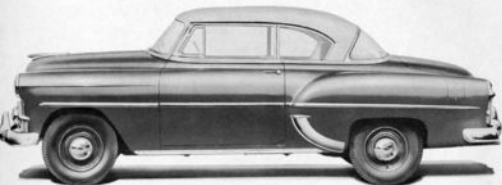
**TWO-TEN 4-DOOR SEDAN  
MODEL 2103**



**TWO-TEN 2-DOOR SEDAN  
MODEL 2102**



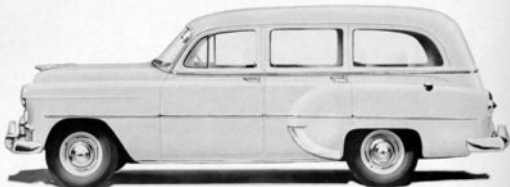
**TWO-TEN CLUB COUPE  
MODEL 2124**



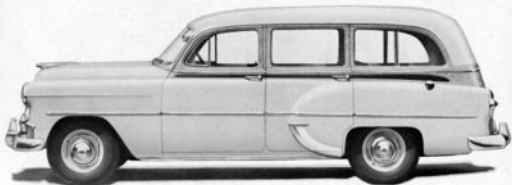
**TWO-TEN SPORT COUPE  
MODEL 2154**



**TWO-TEN CONVERTIBLE  
MODEL 2134**



**TWO-TEN HANDYMAN  
MODEL 2109**



**TWO-TEN TOWNSMAN  
MODEL 2119**

#### **TWO-TEN STATION WAGONS**

Both station wagons of the Two-Ten Series possess the same functional lines and four-door convenience. A full belt molding is now furnished and two-tone exterior colors are available for the first time. Wood grain finish is retained on the Townsman tail and lift gates, and on the upper area of the body sides. The Handyman is identified by a polished lacquer finish overall. The exposed fuel filler cap on the left rear fender is continued from 1952.

## THE BEL AIR SERIES

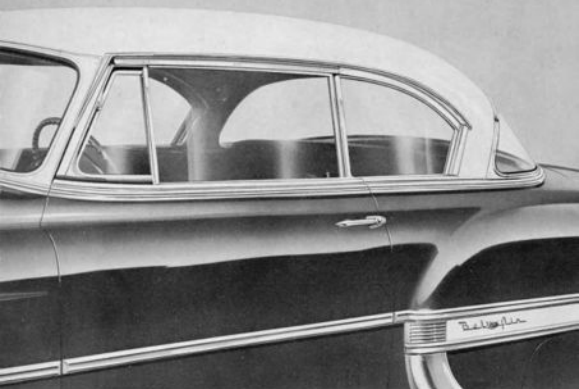
In 1950, Chevrolet introduced the Bel Air Coupe, a completely new model which combined many of the features of the Convertible and the regular Sport Coupe -- a design previously available only in much more expensive automobiles. With its customized appearance and distinctive exterior trim, this model won instant acceptance and has since maintained its popularity. Now, for 1953, the name "Bel Air" has been chosen for the new 2400 Series, the four models of which represent the utmost in beauty and luxury within their price field.

All models in the Bel Air Series are distinguished

by the extra use of bright metal, tastefully employed, and other carefully chosen refinements of exterior styling and trim. Bright metal wheel disks and a special rear fender treatment with a double molding of bright metal enclosing the series name plate are attractive features of the new Series.

Detailed color treatment enhances the exterior appearance. A narrow band of light color encircles the bright metal wheel disks. Contrasting colors are applied to the insert panel on the rear fenders of these models, except in the case of the Madeira Maroon Sedan, on which the insert panel is maroon.



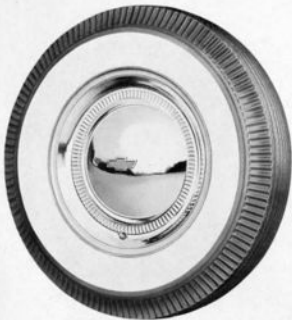


#### SPORT COUPE . . .

The Sport Coupe is set apart from other models by the rakish slant of the narrow top panel at the rear quarters. The impression of openness is heightened by the generous application of bright metal trim around the windows. At the front, windshield pillar caps join with the garnish molding, carrying bright metal around the front corners. Saddle moldings are added on the side window sills to effect an extension of the belt molding and blend with new moldings at the rear of the quarter windows. Chrome plated frames around the side windows and bright metal ventipane drip shields are retained. The drip molding across the top of the windshield is eliminated, but that remaining above the side windows again is covered by stainless steel. Windshield pillar caps and saddle moldings also are furnished on the Convertible.

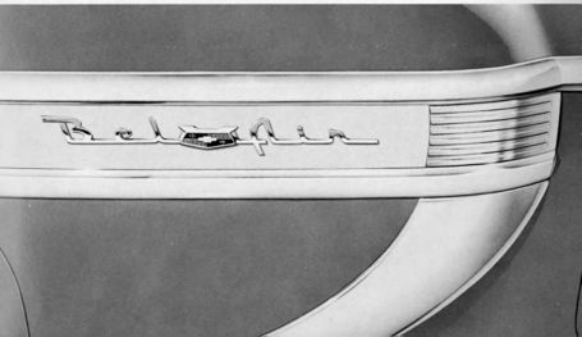
#### SEDAN REVEAL MOLDINGS . . .

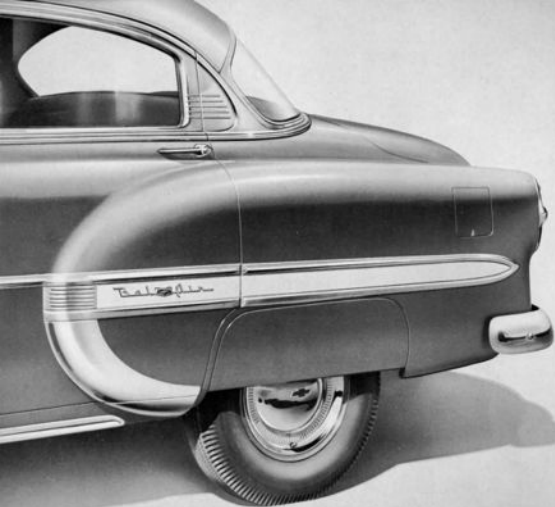
Extra width of the bright metal side window reveal moldings lends greater emphasis to the graceful lines of the top structure on the Bel Air Two-door and Four-door Sedans. The continuity of the broad chrome band at the body belt of the Four-door sedan is provided by addition of a small section of molding on the center pillar between the doors. For well balanced appearance, the center pillar above the belt line is finished in the darker color of two-tone exterior color combinations. In keeping with the customized decorative treatment, front door ventipane drip shields are bright metal.



#### **WHEEL DISKS . . .**

Bright metal wheel disks are furnished in place of conventional hub caps on Bel Air models. Covering all except a narrow band of the rim next to the tire, the disks provide smooth, new wheel contours. The trademark at the center is painted blue. Because the disks are retained by fingers wedged against the wheel rim, hub cap clips are eliminated as are the wheel stripes. As illustrated, optional white sidewall tires now have black scuff ribs in place of white, thus narrowing the white sidewall correspondingly.





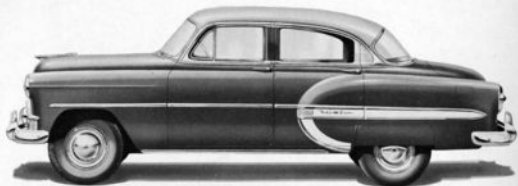
#### **SIDE MOLDINGS . . .**

At the back of the rear door window of the Bel Air Four-door Sedan, the reveal molding blends into a panel of bright metal extending back to the rear window. Five horizontal ribs are embossed in the panel, and the drip molding is shortened to leave the bright metal unobstructed.

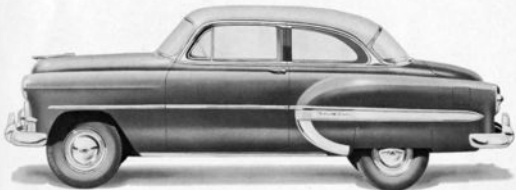
Double rear fender moldings frame a panel on the side of the fender on which the name BEL AIR appears in bright metal script. A gold-plated crest with contrasting touches of black on the shield around the trademark separates the words of the series name. A fluted, bright metal panel at the front carries out the lines of the gravel shield. Rear wheel cover panels, included as regular equipment, give a finished appearance.



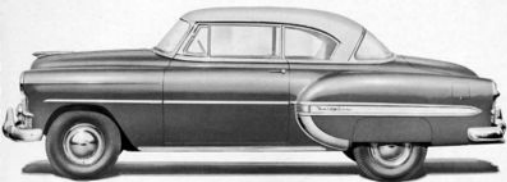
**MODELS OF THE BEL AIR SERIES . . .**



**BEL AIR 4-DOOR SEDAN  
MODEL 2403**



**BEL AIR 2-DOOR SEDAN  
MODEL 2402**



**BEL AIR SPORT COUPE  
MODEL 2454**



**BEL AIR CONVERTIBLE  
MODEL 2434**

**ONE-FIFTY 4-DOOR SEDAN**



## THE ONE-FIFTY SERIES

The fundamental beauty in the basic lines of the 1953 styling is fully apparent in the One-Fifty models.

The radiator grille, bumpers and bumper guards, hood emblem and ornament, the headlight bezels are the same as those for the Two-Ten and Bel Air Series. Similarly, the tail lights and deck lid handle at the rear are identical for all models.

A minimum of decorative bright metal is em-

ployed beyond the basic, functional equipment, just as in previous economy series. Body ornamentation is confined to a full belt molding. The rear fender gravel shield again is black rubber, and its outline is like that for the Two-Ten Series. Horizontal ribs are added, however, to highlight the surface of the shield. Elimination of the sill molding reveals the smart flare at the base of the body.

### REAR WINDOW . . .

Improved visibility is provided in the One-Fifty sedans and coupes by a larger rear window. It is four inches wider than in 1952, and the area is more than eight per cent greater. This conventional rear window also is used in the Two-Ten Club Coupe.

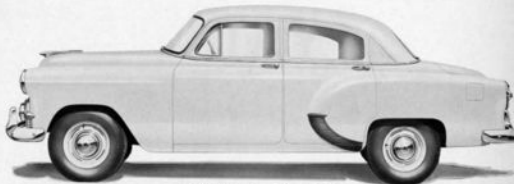




#### **THE HANDYMAN . . .**

In the One-Fifty Handyman, Chevrolet extends the versatile station wagon to the utility line for the first time. It features the same roomy, four-door body as furnished on the Two-Ten station wagons, differing from them only in items of regular equipment and trim. Included are a full belt molding and the Chevrolet name in bright metal script on the tail gate. The rear fender gravel shields are black rubber. A choice of four single exterior colors and two two-tone combinations is available.

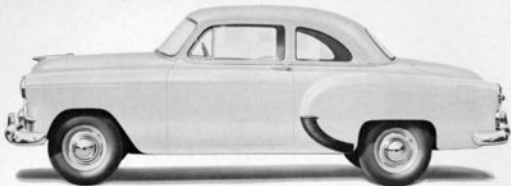
**MODELS OF THE ONE-FIFTY SERIES . . .**



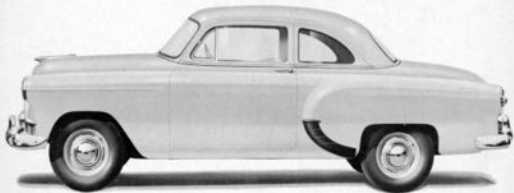
**ONE-FIFTY 4-DOOR SEDAN  
MODEL 1503**



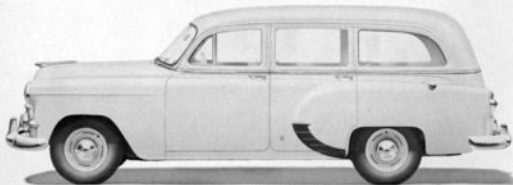
**ONE-FIFTY 2-DOOR SEDAN  
MODEL 1502**



**ONE-FIFTY CLUB COUPE  
MODEL 1524**



**ONE-FIFTY BUSINESS COUPE  
MODEL 1504**



**ONE-FIFTY HANDYMAN  
MODEL 1509**

## EXTERIOR COLORS

### Solid Colors

Ten new colors complement the styling of the 1953 models. The colors retained are Onyx Black, Dusk Gray, Sahara Beige and Saddle Brown, providing a total of fourteen basic colors as before. The light colors follow the trend to delicate pastel hues while the dark colors, except Onyx Black, are of the metallic type to enhance their richness.

Saddle Brown is available as a single color on all models because of its proved popularity. Similarly, this color is now offered with Sahara Beige as a two-tone combination for all the closed models. Seven combinations are to be had on the Sedan and Sport Coupe models in both the Two-Ten and Bel Air Series, and an eighth, India Ivory over Sungold, is reserved for the Bel Air models only. Sungold also is available for the Bel Air Convertible in combination with black top fabric.

Color Description	Color Name Body, Sheet Metal (and Wheels on Series One-Fifty and Two-Ten)	Wheel Stripes (Series One-Fifty and Two-Ten)	Series One-Fifty	
			Sedans and Coupes	Handyman
Black	Onyx Black	Argent Silver	●	
Light Blue	Horizon Blue	Onyx Black	●	
Dark Blue	Regatta Blue	Argent Silver	●	
Light Green	Surf Green	Onyx Black	●	●
Dark Green	Woodland Green	Argent Silver	●	●
Light Gray	Driftwood Gray	Onyx Black	●	
Dark Gray	Dusk Gray	Argent Silver	●	
Beige	Sahara Beige	Onyx Black	●	●
Brown	Saddle Brown	Argent Silver	●	●
Maroon	Madeira Maroon	Argent Silver	●	
Cream	Campus Cream	Onyx Black		
Red	Target Red	Argent Silver		
Yellow	Sungold	Onyx Black		

### Two-Tone Combinations

Color Description	Upper Body	Lower Body, Sheet Metal (and Wheels on Series One-Fifty and Two-Ten)	Wheel Stripes (Series One-Fifty and Two-Ten)	Series One-Fifty	
				Sedans and Coupes	Handyman
Dark Blue over Light Blue	Regatta Blue	Horizon Blue	Onyx Black	●	
Ivory over Light Blue	India Ivory	Horizon Blue	Onyx Black		
Ivory over Dark Blue	India Ivory	Regatta Blue	Argent Silver		
Dark Green over Light Green	Woodland Green	Surf Green	Onyx Black	●	●
Cream over Dark Green	Campus Cream	Woodland Green	Argent Silver		
Dark Green over Cream	Woodland Green	Campus Cream	Onyx Black		
Dark Gray over Light Gray	Dusk Gray	Driftwood Gray	Onyx Black	●	
Brown over Beige	Saddle Brown	Sahara Beige	Onyx Black	●	●
Beige over Brown	Sahara Beige	Saddle Brown	Argent Silver		
Ivory over Yellow	India Ivory	Sungold	Onyx Black		



Series Two-Ten					Bel Air Series				
Sedans	Club Coupe	Sport Coupe	Convertible	Handyman and Townsman	Sedans	Sport Coupe	Convertible	Rear Fender Insert Panel	Wheels (No Stripes)
●	●	●	●		●	●	●	Driftwood Gray	Driftwood Gray
●	●	●	●		●	●	●	India Ivory	Driftwood Gray
●	●				●			India Ivory	Driftwood Gray
●	●	●	●	●	●	●	●	Woodland Green	Campus Cream
●	●			●	●			Campus Cream	Campus Cream
●	●		●		●		●	Regatta Blue	Driftwood Gray
●	●				●			Driftwood Gray	Driftwood Gray
●	●			●	●			Saddle Brown	Sahara Beige
●	●	●	●	●	●	●	●	Sahara Beige	Sahara Beige
●	●				●			Madeira Maroon	Sahara Beige
			●				●	Woodland Green	Campus Cream
			●				●	India Ivory	Driftwood Gray
							●	India Ivory	Driftwood Gray

Series Two-Ten				Bel Air Series			
Sedans	Club Coupe	Sport Coupe	Handyman and Townsman	Sedans	Sport Coupe	Rear Fender Insert Panel	Wheels (No Stripes)
	●						
●		●		●	●	India Ivory	Driftwood Gray
●		●		●	●	India Ivory	Driftwood Gray
●	●	●	●	●	●	Woodland Green	Campus Cream
●		●		●	●	Campus Cream	Campus Cream
●		●		●	●	Woodland Green	Campus Cream
	●						
●	●	●	●	●	●	Saddle Brown	Sahara Beige
●		●		●	●	Sahara Beige	Sahara Beige
				●	●	India Ivory	Driftwood Gray



#### **INSTRUMENT CLUSTER . . .**

The instruments and the thirty-nine hour clock are arranged in a new, single cluster which is framed by a deep bezel. Its outer face is painted to match the dark tone of the instrument panel, and the inner face has a bright metal finish. Within the bezel, the etched bright metal trim plate contains the gauges in two rows in the center. The temperature and gasoline gauges are at the top and the ammeter and oil pressure gauges at the bottom. Two white plastic arrows between the two rows of gauges cover the indicator lights of the accessory direction signal.

Figures, graduations, and pointers of the instruments are very light green on black backgrounds as before. The speedometer has a loop-style needle to facilitate reading of the odometer, and the top graduation is 110 instead of 100 miles-per-hour. A bright metal target decorates the speedometer dial. The letters L and H mark the limits of the oil pressure gage in place of numerals.

The controls are rearranged for more convenient operation. The black plastic knobs, new in shape, have fluted bands and circular center inserts of bright metal. The windshield wiper knob is immediately to the left of the steering column, and the cigarette lighter is installed in the former wiper knob location at the right of the column. In 1952, the lighter was below the right end of the radio grille. Also, the right hand ventilator control knob is relocated from the extreme right of the panel to the right side of the ignition switch.

Key-turn starting is added to the three-position ignition switch, thus eliminating the separate starter button. A plastic escutcheon around the switch is marked to identify the various positions.

The black plastic, T-shaped parking brake handle replaces the metal L-shaped handle to make accidental release less likely.

#### **FRONT COMPARTMENT . . .**

The handsome new instrument panel focuses immediate attention on the control section of the interior. The crown is styled in a smooth, unbroken line which complements the expanse of the one-piece windshield. The general arrangement of the panel is retained with the redesigned instrument cluster and the controls in front of the driver, provision for a radio in the center, and the glove compartment at the right.

Modern design is particularly well represented in the continuous bright metal grille effect, in which the narrow, vertical bars of the radio grille are repeated in the die cast door of the glove compartment at the right and carried through to the design of the tilt-type ash tray on the left which, when closed, appears as part of the grille. For the convenience of the driver, the ash tray is relocated to its present position. The name Chevrolet, in bright metal script above the radio grille identifies the new car.

A two-tone finish for the instrument panel is provided as in 1952. The dark tone of the upper area matches the garnish moldings, and the light tone of the narrow, lower section is carried on to the adjacent steering column and gearshift parts. The gearshift lever is restyled in a streamlined shape which blends into the new lines of the retaining bracket just below the lever.

Because the windshield center divider is eliminated, the rear view mirror is now suspended from the windshield header by a slim bracket. Both the bracket and mirror back are painted in an aluminum color. The rear view mirror in the Sport Coupe, however, again is mounted on the instrument panel crown.

The use of rubber floor covering in colors to harmonize with the interiors is continued.



*Optional Powerglide transmission equipment shown.*

## INTERIORS

### Two-Ten Series

New richness, comfort, and convenience distinguish the interiors of the 1953 Chevrolet.

Prominent among the many new features of the styling are the strikingly designed instrument panel with instruments and controls regrouped for greater driver convenience; new steering wheels; new seat shapes; and a wealth of modern fabrics effectively employed in the individual interiors. Elascofab, a new coated fabric, replaces deep-buff leather in the Bel Air Sport Coupe and Convertible, and is also used in the Two-Ten Station Wagons. This durable material of vinyl plastic on jersey cloth has the surface texture and rich appearance of top grain

leather and lends itself particularly well to the precise tailoring in the interiors of these models.

Interior beauty is even more closely color-related with the exteriors than in the past. Many models of the Two-Ten and Bel Air Series offer a greater variety of interior color combinations for 1953.

The descriptions in this section are based upon the Two-Ten Series. The Bel Air and One-Fifty Series are considered separately in the following chapter. Complete charts, showing the exterior-interior color combinations and trim details for the various models, follow the illustrated section devoted to each series.

Optional Powerglide transmission equipment shown.





#### **SEAT STYLING . . .**

Seats are styled for a luxurious, squared, deep-cushioned appearance. Upholstery is solid color pattern cloth with an interesting modern texture. A light shade covers the cushion and the lower panel of the back rest, contrasting with the dark shade on the top panel of the back rest and on the end panels. Leather fabric in a matching color is used at the base of the end panels, and horizontal, bright metal moldings divide the end panels at the center. The push-button control for seat adjustment is new in shape to harmonize with the seat styling.

The inset main panel of the front seat back is light in color and framed by the darker color materials. The crossbar at the bottom is covered with leather fabric to resist scuffing. The robe cord is installed high on the seat to conform with the styling and to provide maximum height from the floor for utility. The new, tilt-type ash tray displays short, embossed ribs and is painted in the dark color of the seat trim; the bezel is chrome-plated.

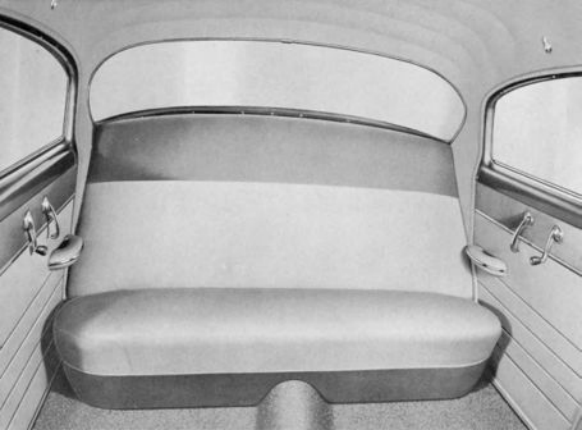


#### STEERING WHEEL . . .

Graceful simplicity marks the design of the steering wheel. The diameter is increased to 18 inches from 17-1/4 inches, and the new rim has more comfortable finger grips. The position of the wheel center is a half inch lower with respect to the seat so, despite the larger size, the top of the wheel is slightly lower to aid visibility over the wheel for drivers of less than average height. The use of two spokes is continued, but these are more slender than before and the applied bright metal bands are eliminated.

The full circle horn ring is supported over, rather than under, the steering wheel spokes, and the spokes extending from the ring to the center serve as bright metal decoration for the steering wheel. This design provides easier operation and less possibility of rattle. The center ornament features the trademark surrounded by concentric rings. The trademark is blue with the background matching the rim of the wheel.





#### **REAR COMPARTMENT . . .**

Luxury and spaciousness characterize the rear compartment. The sidewalls continue the cloth and leather fabric panels introduced on the front doors. Likewise, the seat upholstery matches that of the front seat, although a band of dark material is added at the base of the cushion. The floor covering is solid color, wool pile carpet, and the headlining is napped cloth. Both are color-coordinated with the other interior fabrics as in 1952. Full windows in the rear doors are of the lowering type, replacing the two-section windows which included ventipanes.

#### **TILT-IN FRONT SEAT BACK . . .**

Easier access to the rear seat in two-door models is provided with tilt-in action of the front seat backs. Through new hinging, the seat back pivots toward the center of the car as it is pushed forward, thus increasing the usable door width available when entering or leaving the rear seat. The new hinges also permit eliminating the pocket at the center of the front seat cushion which was formerly necessary for hinge operating clearance.



Optional Powerglide transmission equipment shown.

#### FRONT DOOR ENTRANCE ROOM . . .

The sidewall trim design combines the dark tone pattern cloth at the top with light tone leather fabric over the entire lower area. A bright metal molding at the junction of the materials accents the smart curve near the front. The arm rests are changed in color only, and the bright metal molding at the base of the garnish moldings has been eliminated.

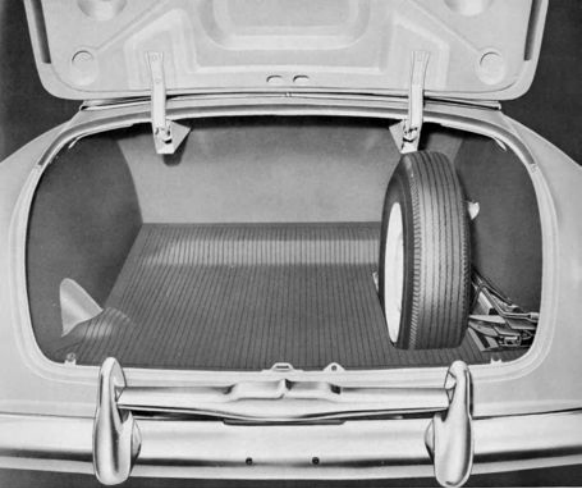
Front door hinges are of the swing-out type, providing more space for easier entrance and exit. Similar benefit results from a wider door opening angle of 61 degrees compared with 54-1/2 degrees in 1952. The rear doors also open wider than before, swinging through a 77 degree arc compared with the previous 64 degrees.

#### VENTIPANE CRANK CONTROL . . .

The front door ventipane is controlled by a small, convenient crank installed on the sidewall below the ventipane. When closed, a sliding bolt lock at the lower rear corner of the ventipane frame can be moved over the vertical window divider bar for security. The crank is styled to match the door handle and window regulator which are retained from 1952. The plastic knobs are black to match the color of the control knobs on the instrument panel. The crank control replaces the friction-type mechanism which has been used since 1949.







#### **LUGGAGE COMPARTMENT . . .**

Easier access to the luggage compartment is provided by the increased size of the deck lid. Particular benefit results from a 4-1/2 inch reduction in the height of the body panel below the lid which makes it nearly flush with the compartment floor. Volume of the luggage space is 22 cubic feet, three cubic feet greater than in 1952. Through changes in the body contours, the shape of the luggage compartment is made more practical with usable space increased 25 per cent, based on stowage of standard pieces of luggage.

Popular features retained include hinge enclosures for luggage protection, counterbalanced hinges, and keyless locking for convenience. Sidewall trim is fiber board and the floor mat is rubber. Both are black in all models, as before. A retaining spring is again included to secure the jack and jack handle to the floor.

## HANDYMAN CARGO SPACE . . .

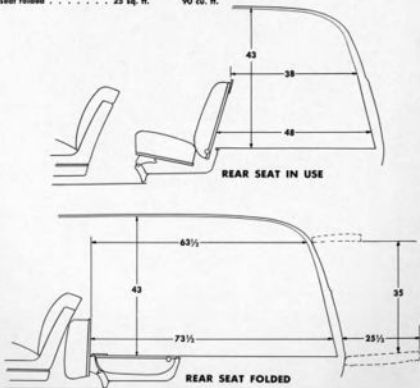
The six-passenger Handyman station wagon is designed for fast, simple conversion of the rear compartment between passenger and cargo carrying uses. With the rear seat in position to utilize the full six-passenger capacity of the car, maximum luggage space behind the rear seat measures 50 cubic feet, more than double the luggage capacity provided in sedans.

To increase the cargo space, the rear seat cushion is tilted up behind the front seat, and the rear seat back is swung down to form an extension of the level floor. Since there are no complicated latches to manipulate, the conversion is accomplished instantly with a minimum of physical effort. The length of the load space is more than six feet at the floor when the rear seat is folded, and the volume is increased to 90 cubic feet. Load space length is extended about 25 inches when the tail gate is lowered.

The eight-passenger Townsman model has the same seating arrangement as previous station wagons. Intermediate and rear seats are removable providing adaptability to varying requirements.

### CARGO SPACE

	FLOOR AREA	VOLUME
Rear seat in use . . . . .	16½ sq. ft.	50 cu. ft.
Rear seat folded . . . . .	25 sq. ft.	90 cu. ft.



Interior width: 45½ between wheelhouses, 54½ maximum between window garnish moldings.



#### HANDYMAN INTERIOR . . .

Beige is combined with either green or brown in the Two-Ten station wagons to harmonize with exterior colors. The interior styling for both models is the same, except that the side window garnish moldings have a wood grain finish in the Townsman whereas those in the Handyman are painted to match the upper color of the instrument panel. New pillar cover plates extend the garnish molding finish between the side windows.

Upholstery for the seat cushions and back rests is beige leather fabric with a rough, straw finish while

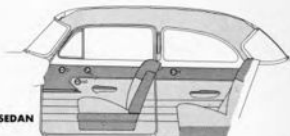
bolsters are elascofab in either metallic green or brown. Colors and textures of the seat upholstery are duplicated in the leather fabrics for the side-walls and the seat backs. The scuff pads on the doors are bright metal with an embossed pattern. Headlining is plain tan leather fabric. Front and rear rubber floor mats are beige as is the linoleum on the load space floor and tail gate. In the Handyman, linoleum also covers the bottom of the rear seat cushion and the rear seat back. Linoleum binding strips and tail gate skid strips are bright metal.



## INTERIOR COLORS AND FABRICS

### TWO-TEN SERIES SEDANS AND COUPES

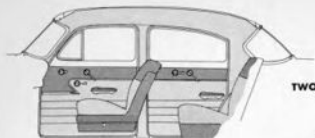
**TWO-TEN 2-DOOR SEDAN  
MODEL 2102**



**Interior-Exterior Color Combinations**

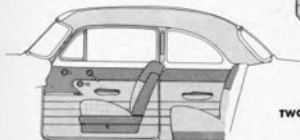
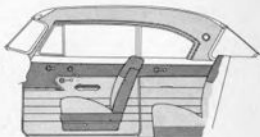
EXTERIOR COLORS	INTERIOR COLORS		TRIM COMBINATION			
	Inst. panel upper Garnish moldings Lock buttons Steering wheel rim and cap	Inst. panel lower Steer. wheel spokes Steering column Gearshift shaft Gearshift lever	Gray	Blue	Green	Brown
Onyx Black	Dusk Gray*	Driftwood Gray	●			
Horizon Blue	Regatta Blue	Horizon Blue		●		
Regatta Blue	Regatta Blue	Horizon Blue		●		
Surf Green	Woodland Green	Surf Green			●	
Woodland Green	Woodland Green	Surf Green			●	
Driftwood Gray	Regatta Blue	Horizon Blue		●		
Dusk Gray	Dusk Gray*	Driftwood Gray	●			
Sahara Beige	Saddle Brown	Sahara Beige				●
Saddle Brown	Saddle Brown	Sahara Beige				●
Madeira Maroon	Madeira Maroon*	Driftwood Gray	●			
Regatta Blue over Horizon Blue	Regatta Blue	Horizon Blue		●		
India Ivory over Horizon Blue	Regatta Blue	Horizon Blue		●		
India Ivory over Regatta Blue	Regatta Blue	Horizon Blue		●		
Woodland Green over Surf Green	Woodland Green	Surf Green			●	
Campus Cream over Woodland Green	Woodland Green	Surf Green			●	
Woodland Green over Campus Cream	Woodland Green	Surf Green			●	
Dusk Gray over Driftwood Gray	Dusk Gray*	Driftwood Gray	●			
Saddle Brown over Sahara Beige	Saddle Brown	Sahara Beige				●
Sahara Beige over Saddle Brown	Saddle Brown	Sahara Beige				●

\* - Onyx Black steering wheel rim & cap.



**TWO-TEN 4-DOOR SEDAN  
MODEL 2103**

**TWO-TEN SPORT COUPE  
MODEL 2154**



**TWO-TEN CLUB COUPE  
MODEL 2124**

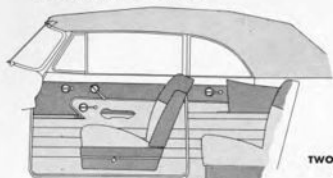
### Interior Colors

AREA		MATERIAL	TRIM COMBINATION			
			Gray	Blue	Green	Brown
Seats	Cushion (less heel panel)	Solid Color	Light Gray	Light Blue	Light Green	Tan
	Back Rest (less bolster)					
	Cushion Heel Panel	Pattern Cloth	Dark Gray	Dark Blue	Dark Green	Brown
	Back Rest Bolster					
	Front Seat Insert	Solid Pattern Cloth	Light Gray	Light Blue	Light Green	Tan
	Back Lower Cross Bar	Leather Fabric	Dark Gray	Dark Blue	Dark Green	Brown
	Front Seat Upper	Solid Pattern Cloth				
	End Panels Lower Molding	Leather Fabric				
Side-walls	Upper Panel	Solid Pattern Cloth	Dark Gray	Dark Blue	Dark Green	Brown
	Lower Panel	Leather Fabric				
Cowl Side Kick Panels		Composition Board	Light Gray	Light Blue	Light Green	Tan
Headlining		Plain Napped Cloth				
Sun-shades	Covering	Leather Fabric	Dark Gray	Dark Blue	Dark Green	Brown
	Binding					
Arm Rests	Upper	Plastic	Light Gray	Light Blue	Light Green	Tan
	Lower*					
Floor	Front	Mottled Rubber	Gray	Blue	Green	Brown
Coverings	Rear	Solid Color Carpet				

\* - Except rear in Sport Coupe.

## INTERIOR COLORS AND FABRICS

### TWO-TEN SERIES CONVERTIBLE



## INTERIOR COLORS AND FABRICS

### TWO-TEN SERIES STATION WAGONS

### TWO-TEN CONVERTIBLE MODEL 2134

Interior-Exterior Color Combinations

EXTERIOR COLOR	TOP COLOR	INTERIOR COLOR		TRIM COMBINATION			
		Inst. panel upper Garnish moldings Lock buttons Steering wheel rim and cap	Inst. panel lower Steering wheel spokes Steering column Gearshift shaft Gearshift lever	Red and Gray	Blue	Green	Brown
Onyx Black	Black	Target Red	Driftwood Gray	●			
Horizon Blue	Blue	Regatta Blue	Horizon Blue		●		
Surf Green	Green	Woodland Green	Surf Green			●	
Driftwood Gray	Blue	Regatta Blue	Horizon Blue		●		
Saddle Brown	Lt. Tan	Saddle Brown	Sahara Beige				●
Campus Cream	Green	Woodland Green	Surf Green			●	
Target Red	Black	Target Red	Driftwood Gray	●			

Interior Colors

AREA		MATERIAL	TRIM COMBINATION			
			Red and Gray	Blue	Green	Brown
Seats	Cushion	Leather Fabric	Red	Light Blue	Light Green	Tan
	Back Rest (less Bolster)			Dark Blue	Dark Green	Brown
	Back Rest Bolster			Light Gray	Light Blue	Light Green
	Front Seat Insert			Light Gray	Light Blue	Light Green
	Back Lower Cross Bar	Plastic	Red	Dark Blue	Dark Green	Brown
	Front Seat End Panels			Dark Blue	Dark Green	Brown
Side-walls	Molding	Metal	Bright			
	Upper Panel	Leather Fabric	Red	Dark Blue	Dark Green	Brown
	Lower Panel		Light Gray	Light Blue	Light Green	Tan
Cowl Side Kick Panels		Composition Board				
Sun-shades	Covering	Leather Fabric	Red	Dark Blue	Dark Green	Brown
	Binding			Dark Blue	Dark Green	Brown
Arm Rests	Front Upper	Plastic	Light Gray	Light Blue	Light Green	Tan
	Front Lower			Dark Blue	Dark Green	Brown
	Rear Upper	Leather Fabric	Red	Dark Blue	Dark Green	Brown
Floor Coverings	Front	Mottled Rubber	Red	Blue	Green	Brown
	Rear			Blue	Green	Brown





**TWO-TEN TOWNSMAN MODEL 2119**



**TWO-TEN HANDYMAN MODEL 2109**

**Interior-Exterior Color Combinations**

EXTERIOR COLORS	INTERIOR COLOR		TRIM COMBINATION	
	Instrument panel upper Garnish molding * Lock buttons Steering wheel rim and cap	Instrument panel lower Steering wheel spokes Steering column Gearshift shaft Gearshift lever	Green	Brown
Surf Green	Woodland Green	Surf Green	●	
Woodland Green	Woodland Green	Surf Green	●	
Sahara Beige	Saddle Brown	Sahara Beige		●
Saddle Brown	Saddle Brown	Sahara Beige		●
Woodland Green over Surf Green	Woodland Green	Surf Green	●	
Saddle Brown over Sahara Beige	Saddle Brown	Sahara Beige		●

\*-Wood Grain finish on side window garnish moldings in Townsman.

**Interior Colors**

AREA		MATERIAL	TRIM COMBINATIONS	
			Green	Brown
Seats	Cushion (except bolster)	Leather Fabric	Beige	Beige
	Back Rest (except bolster)	(Straw Pattern)		
	Cushion and Back Rest Bolsters	Elastofab (Metallic)	Light Green	Brown
	Front Seat	Leather Fabric	Beige	Beige
	Back*	Insert		
		Lower Cross Bar		
	Front Seat End Panels	Leather Fabric (Metallic)	Light Green	Brown
Doors	Upper Panel	Molding		Bright
	Center Panel	Leather Fab. (Metallic)	Light Green	Brown
	Scuff Pad	Leather Fab. (Straw Pat.)	Beige	Beige
Cowl Side Kick Panels		Metal	Rigidized Metal	
Headlining			Light Green	Brown
Sun- shades	Covering	Leather Fabric	Tan	Tan
	Binding			
Arm Rests	Upper	Leather Fab. (Straw Pat.)	Beige	Beige
	Lower	Plastic		
Floor	Front	Rubber		
Coverings	Center			
	Rear**	Linoleum (Ribbed)		
Rear Quarter Panels		Leather Fab. (Metallic)	Light Green	Brown
Wheelhouse Cover Panels		Paint	Manila Beige	Manila Beige

\* - Also center and rear seat backs in Townsman.

\*\* - Also rear seat back and bottom of rear seat cushion in Handyman.





Optional Powerglide transmission equipment shown.

## BEL AIR SERIES

### REAR COMPARTMENT OF SEDANS . . .

Quality and luxury keynote the interior treatment of the Bel Air Four-door and Two-door Sedans with new, rich-textured fabrics used together for the utmost in smartness and durable beauty.

Seats are tailored in a combination of pleated, plain color broadcloth and bolsters of ladder pattern cloth which has a lustrous nylon outer face. Welts of deep color tone outline the bolsters. The side-wall design of the Four-door Sedan is now extended onto the rear quarter panels, creating an especially well-integrated appearance. Also featured are extra-wide moldings on the front seat end panels, and a bright metal finish for the rear seat ash tray in the Four-door Sedan. The two-tone interiors are available in gray, blue, green or brown for color-coordination with the exteriors.

### FRONT COMPARTMENT OF SEDANS . . .

The Bel Air Series instrument panel and steering wheel include all the features and equipment found on the Two-Ten Series. In addition, the instrument panel is given special beauty by a cap on the right, carrying through the band of bright metal formed by the radio grille and glove compartment door.

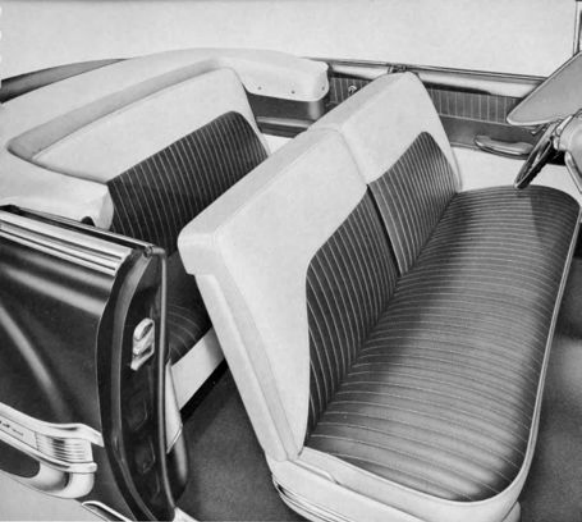
For the Sedans, leather fabric in a dark tone is combined with a lighter shade of flat cloth in the modern lines of the sidewalls. Among other items contributing to the luxurious atmosphere of these interiors, is wool pile carpeting on the floors both front and rear, and bright metal finish on the back of the rear view mirror.

### SPORT COUPE . . .

Modern materials, adapted to its fresh, youthful lines, enhance the new interior of the Bel Air Sport Coupe, style leader in the Chevrolet line. Checked pattern cloth on the seats is complemented with elascofab on the cushion bolsters and the modified bolster treatment of the back rests. Distinctive sidewall styling is executed in two tones of leather fabric. New, round interior lights are located high on the rear quarter panels, and bright metal accents are introduced in the rear window molding, the roof bows, and the upper part of the side window moldings. Headlining is leather fabric rather than napped cloth. The interior is offered in five different color combinations to insure close color harmony with the exterior colors available.

Optional Powerglide transmission equipment shown.



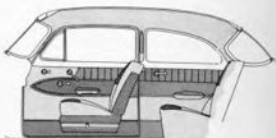


#### **CONVERTIBLE . . .**

The striking new interior of the Bel Air Convertible is available in a total of six two-tone or two-color combinations in which the dark tone is set off by light metallic colors or white. Elascotab seat upholstery is finished to give the rich, smooth appearance of top grain leather. The dark tone areas are saddle stitched to create closely spaced pleats. The light tone is applied in a stylized bolster treatment on the back rest and on the cushion facing. The top boot is made from the same light tone elascotab to create close harmony between exteriors and interiors. The colors of the seat upholstery are repeated in leather fabric on the sidewalls which incorporate the same design as other Bel Air models. Floor covering is wool pile carpet both front and rear.

## INTERIOR COLORS AND FABRICS

### BEL AIR SERIES SEDANS



**BEL AIR 2-DOOR SEDAN MODEL 2402**



**BEL AIR 4-DOOR SEDAN MODEL 2403**

#### Interior-Exterior Color Combinations

EXTERIOR COLORS	INTERIOR COLOR		TRIM COMBINATION			
	Inst. panel upper Garnish moldings Lock buttons Steering wheel rim and cap	Inst. panel lower Steering wheel spokes Steering column Gearshift shaft Gearshift lever	Gray	Blue	Green	Brown
Onyx Black	Dusk Gray *	Driftwood Gray	●			
Horizon Blue	Regatta Blue	Horizon Blue		●		
Regatta Blue	Regatta Blue	Horizon Blue		●		
Surf Green	Woodland Green	Surf Green			●	
Woodland Green	Woodland Green	Surf Green			●	
Driftwood Gray	Regatta Blue	Horizon Blue		●		
Dusk Gray	Dusk Gray *	Driftwood Gray	●			
Sahara Beige	Saddle Brown	Sahara Beige				●
Saddle Brown	Saddle Brown	Sahara Beige				●
Madeira Maroon	Madeira Maroon *	Driftwood Gray	●			
India Ivory over Horizon Blue	Regatta Blue	Horizon Blue		●		
India Ivory over Regatta Blue	Regatta Blue	Horizon Blue		●		
Woodland Green over Surf Green	Woodland Green	Surf Green			●	
Campus Cream over Woodland Green	Woodland Green	Surf Green			●	
Woodland Green over Campus Cream	Woodland Green	Surf Green			●	
Saddle Brown over Sahara Beige	Saddle Brown	Sahara Beige				●
Sahara Beige over Saddle Brown	Saddle Brown	Sahara Beige				●
India Ivory over Sungold	Dusk Gray *	Driftwood Gray	●			

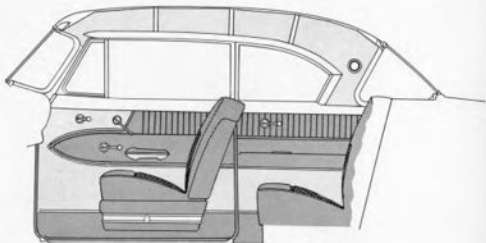
\*-Onyx Black steering wheel rim & cap

### Interior Colors

AREA				MATERIAL	TRIM COMBINATION				
					Gray	Blue	Green	Brown	
Seats	Cushion and Back Rest (less bolsters)			Plain Broadcloth	Light Gray	Light Blue	Light Green	Tan	
	Cushion and Back Rest Bolsters			Ladder Pattern Cloth					
	Welts			Leather Fabric	Dark Gray	Dark Blue	Dark Green	Brown	
	Front Seat Back	Insert	4-Dr.	Plain Flat Cloth	Light Gray	Light Blue	Light Green	Tan	
		Lower							Cross Bar
	Front Seat End Panels	Upper	Plain Flat Cloth	Dark Gray	Dark Blue	Dark Green	Brown		
		Lower							
		Molding	Metal					Bright	
	Side- walls	Upper Panel			Leather Fabric	Dark Gray	Dark Blue	Dark Green	Brown
		Center Panel			Plain Flat Cloth	Light Gray	Light Blue	Light Green	Tan
Scuff Pad			Leather Fabric	Dark Gray	Dark Blue	Dark Green	Brown		
Cowl Side Kick Panels			Composition Board						
Headlining				Plain Napped Cloth	Light Gray	Light Blue	Light Green	Tan	
Sun- shades	Covering								
	Binding			Leather Fabric	Dark Gray	Dark Blue	Dark Green	Brown	
Arm Rests	Front	Upper							Plastic
		Lower							
	Rear	Upper		Leather Fabric	Dark Gray	Dark Blue	Dark Green	Brown	
		Lower		Plastic	Light Gray	Light Blue	Light Green	Tan	
Floor Coverings	Front			Solid Color Carpet	Dark Gray	Dark Blue	Dark Green	Brown	
	Rear								

## INTERIOR COLORS AND FABRICS

### BEL AIR SERIES SPORT COUPE



BEL AIR SPORT COUPE MODEL 2454

#### Interior-Exterior Color Combinations

EXTERIOR COLORS	INTERIOR COLORS		TRIM COMBINATION				
	Inst. panel upper Garnish moldings Lock buttons Steering wheel rim and cap	Inst. panel lower Steer. wheel spokes Steering column Gearshift shaft Gearshift lever	Blue	Green	Brown	Black and White	Yellow and White
Onyx Black	Onyx Black	Driftwood Gray				●	
Horizon Blue	Regatta Blue	Horizon Blue	●				
Surf Green	Woodland Green	Surf Green		●			
Saddle Brown	Saddle Brown	Sahara Beige			●		
India Ivory over Horizon Blue	Regatta Blue	Horizon Blue	●				
India Ivory over Regatta Blue	Regatta Blue	Horizon Blue	●				
Woodland Green over Surf Green	Woodland Green	Surf Green		●			
Campus Cream over Woodland Green	Woodland Green	Surf Green		●			
Woodland Green over Campus Cream	Woodland Green	Surf Green		●			
Saddle Brown over Sahara Beige	Saddle Brown	Sahara Beige			●		
Sahara Beige over Saddle Brown	Saddle Brown	Sahara Beige			●		
India Ivory over Sungold	Sungold	Driftwood Gray					●

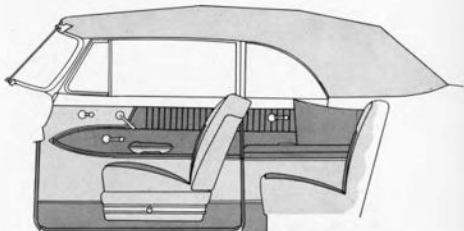


### Interior Colors

AREA			MATERIAL	TRIM COMBINATION				
				Blue	Green	Brown	Black and White	Yellow and White
Seats	Cushion and Back Rest (less bolsters)		Checked Pattern Cloth	Two-tone Blue	Two-tone Green	Brown and Tan	Black and White	Yellow and White
	Cushion and Back Rest Bolsters		Elascofab	Metallic Light Blue	Metallic Light Green	Metallic Tan	White	White
	Welts		Leather	Light Blue	Light Green	Tan	White	White
	Front Seat	Insert	Fabric					
	Back	Lower		Dark Blue	Dark Green	Brown	Black	Yellow
		Cross Bar	Color Carpet					
	Front Seat	Upper	Plastic	Metallic	Metallic	Metallic	White	White
	End Panels	Lower		Light Blue	Light Green	Tan		
		Molding	Metal	Bright				
Side-walls	Upper Panel		Leather Fabric	Dark Blue	Dark Green	Brown	Black	Yellow
	Center Panel			Metallic	Metallic	Metallic	White	White
				Light Blue	Light Green	Tan		
	Scuff Pad			Dark Blue	Dark Green	Brown	Black	Yellow
Cowl Side Kick Panels			Comp. Board					
Headlining								
Sun-shades	Covering		Leather	Light Blue	Light Green	Tan	White	White
	Binding		Fabric					
Arm Rests	Front	Upper		Dark Blue	Dark Green	Brown	Black	Yellow
		Lower	Plastic	Light Blue	Light Green			
	Rear	Upper	Leather	Dark Blue	Dark Green			
		Fabric						
Floor Coverings	Front		Solid					
	Rear		Color Carpet					

## INTERIOR COLORS AND FABRICS

### BEL AIR SERIES CONVERTIBLE



**BEL AIR CONVERTIBLE MODEL 2434**

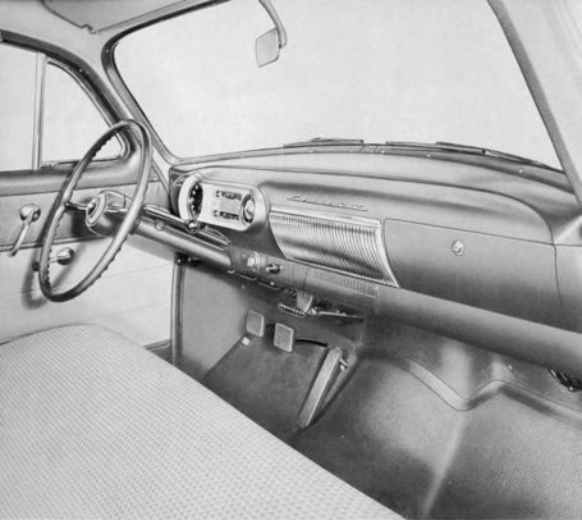
#### Interior-Exterior Color Combinations

EXTERIOR COLORS	TOP COLOR	INTERIOR COLORS		TRIM COMBINATION					
		Inst. panel upper Garnish moldings Lock buttons Steering wheel rim and cap	Inst. panel lower Steering wheel spokes Steering column Gearshift shaft Gearshift lever	Blue	Green	Brown	Red and White	Black and White	Yellow and White
Onyx Black	Black	Onyx Black	Driftwood Gray					●	
Horizon Blue	Blue	Regatta Blue	Horizon Blue	●					
Surf Green	Green	Woodland Green	Surf Green		●				
Driftwood Gray	Blue	Regatta Blue	Horizon Blue	●					
Saddle Brown	Lt. Tan	Saddle Brown	Sahara Beige			●			
Campus Cream	Green	Woodland Green	Surf Green		●				
Target Red	Black	Target Red	Driftwood Gray				●		
Sungold	Black	Sungold	Driftwood Gray						●

# Interior Colors

AREA			MATERIAL	TRIM COMBINATION									
				Blue	Green	Brown	Red and White	Black and White	Yellow and White				
Seats	Cushion (less facing)		Elascofab										
	Back Rest (less bolster)			Dark Blue	Dark Green	Brown	Red	Black	Yellow				
	Cushion Facing			Met.	Metallic	Met.	White	White	White				
	Back Rest Bolster			Lt. Blue	Lt. Green	Tan	White	White	White				
	Welts		Leather	Lt. Blue	Lt. Green	Tan	White	White	White				
	Front Seat	Insert	Fabric										
		Back	Lower	Solid	Dark Blue	Dark Green	Brown	Red	Black	Yellow			
			Cross Bar	Color Carpet									
	Front Seat	Upper	Plastic	Met.	Metallic	Met.	White	White	White				
		Lower		Lt. Blue	Lt. Green	Tan	White	White	White				
End Panels		Molding	Metal	Bright									
Side-walls	Upper Panel		Leather	Dark Blue	Dark Green	Brown	Red	Black	Yellow				
	Center Panel			Met.	Metallic	Met.	White	White	White				
				Lt. Blue	Lt. Green	Tan							
	Scuff Pad												
Cowl Side Kick Panels			Comp. Board										
Sun-shades	Covering		Leather	Dark Blue	Dark Green	Brown	Red	Black	Yellow				
	Binding												
Arm Rests	Front	Upper	Fabric										
		Lower	Plastic	Light Blue	Light Green								
	Rear	Upper	Leather										
Floor Coverings	Front		Solid	Dark Blue	Dark Green								
	Rear									Color Carpet			
Folding Top Boot			Elascofab	Met. Lt. Blue	Metallic Lt. Green	Met. Tan	White	White	White				





## ONE-FIFTY SERIES

### REAR COMPARTMENT . . .

New materials are employed to carry out for the One-Fifty sedans and coupes a two-tone gray interior treatment which harmonizes with any of the exterior colors offered. Seat upholstery is light gray pattern cloth with dark gray, textured leather fabric introduced at the base of the seats. The front seat back and upper side panels are covered with plain dark gray flat cloth, and the molding on the front seat end panels is painted light gray.

The full leather fabric sidewall trim is continued in a new design for 1953. The new dark gray textured material is repeated on the top and bottom panels to contrast with the light gray center panel. Front and rear floor coverings are black rubber.

### FRONT COMPARTMENT . . .

Practical simplicity marks the interior treatment for the One-Fifty Series. The instrument panel, garnish moldings and other painted areas are finished in a single color: dark gray for the sedans and coupes, and dark green for the Handyman. A conventional, painted metal door for the glove compartment is used instead of the die cast door of the other series. The radio grille and nameplate at the center of the instrument panel, however, are the same for all models. In keeping with other details of the interior, the rear view mirror back panel and bracket are painted.



#### STEERING WHEEL . . .

The steering wheel is styled with two slim spokes instead of the former three. Like the wheel for the other series, it is larger in diameter and has improved finger grips on the rim. The steering wheel, which matches the color of the instrument panel, is dark gray in sedans and coupes, and dark green in the Handyman.

The attractive new horn button at the center has a bright metal finish and carries the trademark on a stylized shield at the center.

#### INSTRUMENTS AND CONTROLS

The instrument cluster duplicates the modern lines and arrangement of the Two-Ten and Bel Air Series but differs in details of decoration and finish. The outer face of the bezel is painted to match the instrument panel, and contrasting light gray covers the inner face. The trim plate is of etched bright metal, but there is no bright metal trim on the speedometer face. As no clock is furnished, an ornamental cover plate is substituted in its place. The control knobs are plain black plastic with fluted rims. The letter V on the ventilator control knobs is painted white. A painted metal button covers the mounting hole for the cigarette lighter.



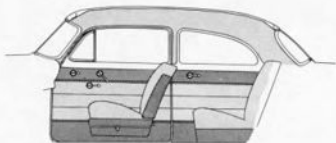
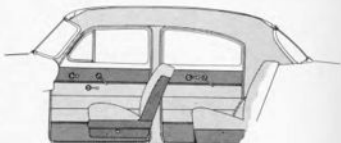


#### **HANDYMAN INTERIOR . . .**

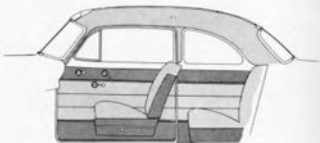
In versatility and roominess, the One-Fifty Handyman is the equal of the Two-Ten model described previously. The interior styling, however, parallels that for the One-Fifty sedans and coupes, although leather fabric is employed in place of cloth for seat upholstery and headlining, and the two-tone color scheme is green rather than gray.

Seat cushions and back rests are light green while the front seat back and end panels are dark green. The new textured leather fabric in dark green is used at the base of the front seat, on the top and bottom panels of the door trim, and on the quarter panels at the rear. Interior painted parts, the front and rear rubber floor mats, and the ribbed linoleum for the load space are dark green. Linoleum binding strips are painted and no skid strips are furnished on the tail gate.

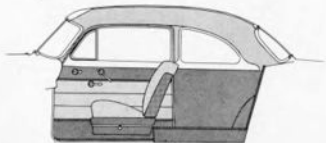
**ONE-FIFTY 4-DOOR SEDAN  
MODEL 1503**



**ONE-FIFTY 2-DOOR SEDAN  
MODEL 1502**



**ONE-FIFTY CLUB COUPE  
MODEL 1524**



**ONE-FIFTY BUSINESS COUPE  
MODEL 1504**

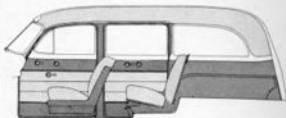


# **INTERIOR COLORS AND FABRICS** **ONE-FIFTY SERIES SEDANS AND COUPES**

AREA			MATERIAL	COLOR
Seats	Cushion and Back Rest		Pattern Cloth	Light Gray
	Cushion Heel Pad		Textured Leather Fabric	Dark Gray
	Front Seat	Insert	Plain Flat Cloth	
	Back	Lower Cross Bar	Textured Leather Fabric	
	Front Seat	Upper Panel	Plain Flat Cloth	
	End Panels	Lower Panel	Textured Leather Fabric	
		Molding	Paint	Driftwood Gray
Sidewalls	Upper Panel		Textured Leather Fabric	Dark Gray
	Center Panel		Leather Fabric	Light Gray
	Scuff Pad		Textured Leather Fabric	Dark Gray
Cowl Side Kick Panels			Composition Board	
Headlining			Plain Napped Cloth	Light Gray
Sunshade	Covering			
	Binding		Leather Fabric	Dark Gray
Floor	Front		Rubber	Black
Coverings	Rear			
Instrument Panel			Paint	Dark Gray
Garnish Moldings				
Lock Buttons				
Steering Column				
Gearshift Shaft and Lever				
Steering Wheel				

# **INTERIOR COLORS AND FABRICS** **ONE-FIFTY SERIES STATION WAGON**

**ONE-FIFTY HANDYMAN  
 MODEL 1509**



AREA			MATERIAL	COLOR
Seats	Cushion and Back Rest		Leather Fabric	Light Green
	Front Seat	Insert		Dark Green
	Back	Lower Cross Bar		
	Rear Seat	Back of Back Rest	Linoleum (Ribbed)	
		Bottom of Cushion		
	Front Seat	Upper Panel	Leather Fabric	
	End Panels	Lower Panel	Textured Leather Fabric	
		Molding	Paint	Woodland Green
Doors	Upper Panel		Textured Leather Fabric	Dark Green
	Center Panel		Leather Fabric	Light Green
	Scuff Pad		Textured Leather Fabric	Dark Green
Rear Quarter Panels				
Cowl Side Kick Panels			Composition Board	
Headlining and Sunshade			Leather Fabric	Light Green
Floor	Front		Rubber	Dark Green
Coverings	Center			
	Rear			
Wheelhouse Cover Panels			Paint	Woodland Green
Instrument Panel				
Garnish Moldings				
Lock Buttons				
Steering Column				
Gearshift Shaft and Lever				
Steering Wheel				



## BODY AND SHEET METAL STRUCTURE

Since 1925, with few exceptions, the Fisher Body Division has built all Chevrolet bodies. Famous for fine craftsmanship, this largest manufacturer of automobile bodies has an independent engineering staff which brings to Chevrolet units the same or similar structural features found in higher-priced General Motors cars. The Fisher unisteel body construction leads the industry year after year in improvements for greater comfort, durability, convenience and safety.

Underlying the beauty of the 1953 models is a completely new body structure that has important increases in overall strength and rigidity. Framed with strong yet slender pillars for best visibility, the body is a network of scientifically designed panels, gussets, reinforcements and beams.

Revisions in fundamental components contribute to greater stability, and reduce the passenger compartment noise level. Many changes in construction result from the incorporation of new features, such as the one-piece windshield in all models, the wrap-around rear window in Two-Ten and Bel Air sedans and sport coupes, a larger opening for the luggage compartment, and swing-out front door hinges. Other structural changes are related to the wider, lower body.

THE UNDERBODY again is a heavy gauge two-piece panel, slightly wider than the 1952 floor. Four full-width U-channels are continued as the main crosswise support. The box-girder side sills or

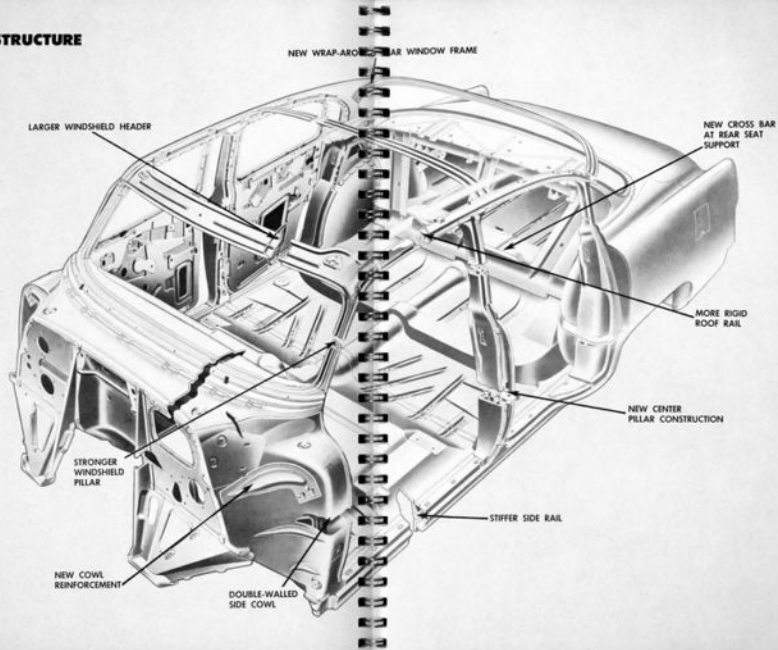
rocker panels, however, are made larger in cross-section. For instance, the section under the center pillar is approximately  $3/4$  of an inch wider,  $1/2$  inch deeper, and has nearly twice as much enclosed area. The result is a more rigid girder that contributes substantially to the 10 per cent increase in beam stiffness of the entire body structure.

The body mounting reinforcements at the front corners of the underbody are more massive in construction to compensate for the elimination of the top-of-floor to side-of-cowl brackets. Formerly simple angle brackets, these are now of flanged-channel construction, forming closed boxes of considerable strength when spot welded to the underbody.

The embossed, stiffening ribs in the floor of the rear compartment now have a diagonal pattern for crosswise as well as lengthwise rigidity. Shock absorbers are attached directly to the body as before, and the heavy-gauge reinforcements at the mounting points continue to be welded to the rear seat pickup in the floor. As in previous models, the spare wheel well is welded to the body floor on the right side of the car, and two flanged-channel braces are provided on the underside for attachment of the gasoline tank.

UPPER STRUCTURE members, such as pillars and roof rails, have enlarged cross-sections, providing the new body with even greater strength and rigidity in this area.

## 1953 BODY STRUCTURE

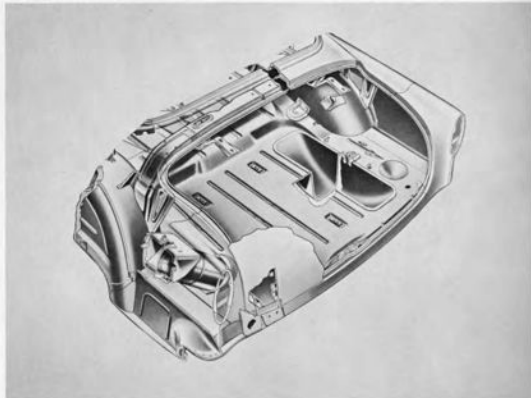


Use of the one-piece windshield and the wrap-around rear window require added stiffness in the upper structure at these areas. To increase the stiffness of the windshield frame, an enlarged channel-type header bar of 1/2 inch deeper section now merges with larger pillars of simpler construction. Three pieces replace four in the simplified windshield pillar construction. Its greater rigidity has increased the stiffness about 70 per cent and, considering the pillar in simple bending, its strength is over 40 per cent greater.

Rugged channel-type rear window frames are continued. However, to maintain rigidity, the channels now join with the rear quarter inner panels so, in effect, the roof ends at the upper edge of the rear window.

Except for stiffer, larger box-girder roof rails and revisions in shape and size for styling, the all-steel Turret Top is continued without change. The rail structure again spans the body from front to rear and ties in with the rear quarter inner panel. Its enclosed area is increased about 20 per cent, increasing stiffness over 20 per cent and bending strength about 30 per cent.

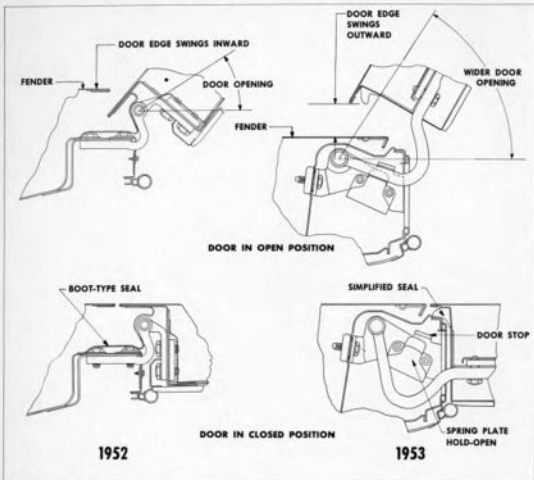
#### **BODY REAR STRUCTURE**



**BODY REAR STRUCTURE.** To provide easier access to the luggage space, the deck lid opening is deeper than before, and now is nearly flush with the level of the compartment floor. Since the larger opening reduces torsional rigidity, stiffness is maintained by redesign and the addition of new reinforcements. Twisting resistance is augmented by a rigid cross bar which is added to the rear seat back support. Braces at the wheelhouse are made stronger and new reinforcements are applied to the lower corners of the deck lid opening to supplement the torsional rigidity of the body.

In the area of the lid hinges, just above the deck opening, the body is reinforced by a new, lateral, channel-type member. Added to support the larger, heavier deck lid, it spans the width of the opening and is joined to the wheelhouse braces at the sides.

Rear fenders continue to be integral with the body rear quarter panels, and separate, semi-circular wheelhouses again provide double-walled construction. For simpler fabricating and weathersealing, a two-piece wheelhouse design replaces the former multiple-piece construction. The new wheelhouse outer panel, embossed for reinforcement, is welded



#### FRONT DOOR HINGES

to an inner panel to form a rigid support for the body rear quarter structure. The fender repair access panel is eliminated, since field surveys have indicated a decline in its use.

The housing for the fuel filler pipe in the left rear quarter panel is larger because of an increase in the diameter of the filler pipe. In design, however, the housing remains a simple, large tube passing any gasoline spill directly to the ground.

Door closing and sealing characteristics whereby doors close easily without repeated slamming are an important consideration in the body design. The stiffness that is built into the 1953 Chevrolet structure minimizes the possibility of door frame springing or bending. Thus, good door fits are maintained for the life of the car and the traditional, solid sound of a secure door closure is assured.

SWING-OUT, box-type hinges for the front doors replace the former swing-in, butt-type to simplify weathersealing and increase entrance room. Pivoting about a new hinge center, the front of the door is made to swing outward, away from the fender surface. A less complex weatherseal construction is required and a ten per cent wider opening of the front door provides greater entrance room. For instance, foot room between the seat and the open door is increased one inch.

The stiffness of both cowl side and hinge pillar are increased because of the greater loads placed upon them by the new hinge design. As the door swings outward, the greater overhang places an increased twisting load on the hinge mounting. Furthermore, the larger hinge arms rotate into the body, making a larger pillar necessary.

Stiffening of the cowl side is accomplished by the addition of an inner panel which has the further advantage of simplifying the previous reinforced, single-wall construction. Also, an external reinforcing brace is welded to both outer sides of the cowl at the upper hinge level to resist body deflections.

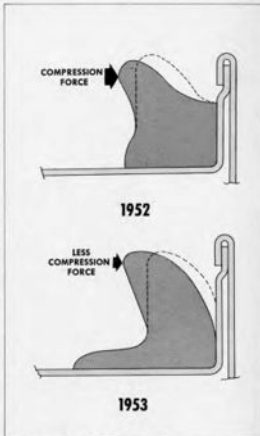
Forming the hinge pillar section approximately 2-1/2 inches wider has adequately stiffened it, and ample room is acquired to mount a hinge box and reinforce its opening.

A new door hinge pillar inner panel adds the necessary reinforcement around the door half of each hinge mounting. It extends from the window opening to the lower edge of the door and is spot welded in place backing up both upper and lower hinge mounting.

THE FRONT DOOR HOLD-OPEN device is improved by a simpler construction. Replacing the previous strap design are two spring plates mounted inside each hinge box above and below the hinge arm. As the door is opened, the hinge arm passes over a hump on each spring plate, after which the plates snap back into place to hold the door open. A stop in the hinge box limits the degree of door opening. The door is released for closing when sufficient pressure is applied to deflect the spring plates.

SWING-IN, butt-type, hinges are continued on the rear doors of the new body. The frame for the rear door consists of the roof rail, side sill, center pillar, and lock pillar. The roof rail and side sill, as previously described, are more rigid. The center pillar is simplified and now has a three-piece section instead of four. From the standpoint of

#### FRONT DOOR HOLD-OPEN DEVICE



#### IMPROVED DOOR WEATHERSEAL

hinge load, no change occurs in the rear; therefore, although the section is slightly enlarged, the stiffness of the new pillar is held unchanged.

Like the center pillar, the rear lock pillar is reshaped to follow the lines of the new styling; in addition, it features improved weathersealing. Between the belt line and the wheelhouse, the seal formerly followed the line of the body contours, making compression sealing difficult to maintain. By making the sealing line straight, a tighter, more trouble free seal is attained.

THE SPONGE RUBBER WEATHERSEALS are reshaped for both front and rear doors and the section is revised to reduce the door closing effort. Formerly a full-compression type, the new section is a deflecting lip design which reduces its compression pressure. The greater structural rigidity of the door frames coupled with the reduced seal compression pressure results in a noteworthy improvement of door closing ease.



1952



1953

#### DOUBLE-LIP VENTIPANE WEATHERSEAL

VENTIPANE FRAME SEALING is improved by replacing the former single-lip seal with a double-lip design. The new seal provides greater protection against leakage of wind, water, and dust into the car and will eliminate many troublesome complaints associated with the former design. When rotated to the closed position, the ventipane passes over one lip of the seal then lies in the groove between the two lips of the seal.

BODY-TO-FRAME mounting continues to be the basic twenty point attachment, but is improved with a broader-base support to reduce the body side overhang in the rear seat area.

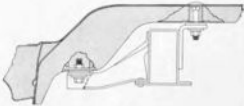
To augment strength and stiffness of the underbody at this point, the body bracket is extended outward from the frame side member to a point of attachment that is closer to the more rigid side sill. The full-width cross support of the underbody is reshaped to reach this new mounting point. The use of an inboard body bolt is continued to retain the double-bolt type of attachment which straddles the frame side member.

WINDSHIELD WIPER operation is quieter and maintenance is easier than on former models. Flexible steel cables replace the connecting arms, eliminating the noise that is inherent in the drive pre-

#### WIDE-BASE BODY MOUNTING BELOW REAR SEAT

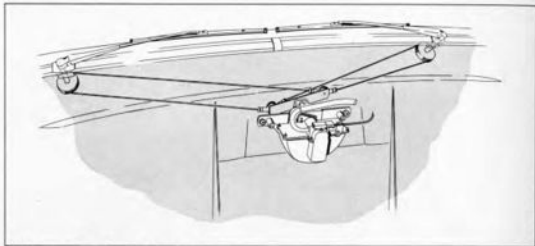


1952



1953





#### CABLE DRIVE WINDSHIELD WIPERS

viously used. By mounting the wiper motor on the engine side of the dash panel it is given a more accessible service location and the passengers are insulated from vacuum motor noise.

The motor is again controlled by a conveniently located instrument panel knob which, unlike an electric motor, adjusts the wiper to any speed to suit all weather conditions.

**SHEET METAL.** Although basically similar in construction to the 1952 model, the front end sheet metal is improved in rigidity, functional utility and durability. Front fenders, radiator grille, fender skirts and baffles are again integrated into a rigid framework of steel panels anchored to the radiator support. This unitized structure continues to be rigidly braced, attached to the body, and mounted at a central, rubber-insulated point on the chassis radiator support cross member. Thus, the time-proved Stabilized Front End feature is maintained to minimize front end vibration.

A new reinforcing brace provides a further reduction of sheet metal vibration by stiffening the overhanging gravel deflector and the portion of the radiator grille directly above it. This channel-type brace is an outrigger extending from the radiator support to the bottom of the gravel deflector at the center of the car, increasing the rigidity of this area.

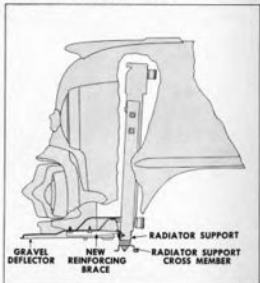
Other features such as hood mounting, hood latch and hinge geometry are essentially the same as previously used. The new shape of the hood panel results in a forward shift of weight, and the capacity of the hinge counterbalancing springs is increased accordingly.

Revised fender skirts in the engine compartment are neater and more compact than the former design. The lower side of the left fender skirt is now

embossed to form an integral steering gear shield to eliminate the former detachable shield.

Revisions in the all-weather body ventilation system increase the overall air capacity and reshaping of the air ducts simplifies their manufacture. The front opening of the left hand air duct is enlarged approximately 56 per cent in cross sectional area. This provides a greater air ram effect to force more outside air through the ventilation system during the forward motion of the car. For simpler

#### NEW GRAVEL DEFLECTOR BRACE



fabrication, the right hand air duct is now a round tube like that on the left side, instead of a rectangular duct.

To minimize excessive movement in the instrument panel area of convertible coupes, the body is isolated from the front end sheet metal by inserting special rubber washers at the conventional body-to-sheet metal points of attachment. Thus, vibration forces in the sheet metal set up from road shock

disturbances are dampened to prevent their transmission into the body shell.

Extensive road testing undertaken at the General Motors Proving Ground has indicated the advantages of isolating the body from the sheet metal to obviate noise and rattle difficulties in the instrument panel area. This design change represents another advancement made by Chevrolet in the bringing of closed body stability to the convertible models.

## OVERALL SIZE AND ROOMINESS

Practical, compact overall size and generous interior roominess are featured in the modern, functional design of the new cars. Overall length is even shorter than before, nearly all models have a lower overall height, and maximum width is only slightly increased. Most of the interior dimensions equal or exceed those of the previous models. The consideration of dimensional changes that follows is based on the four-door sedan for simplicity, since these changes are typical for the entire line.

**INTERIOR DIMENSIONS.** Interior width above the belt line is increased by the straighter body side. This provides a marked increase in hat room for the front and rear passengers and slightly more front seat shoulder room.

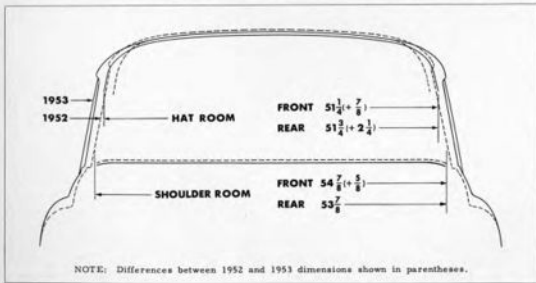
The same headroom is retained with the new roof line by lowering the floor under the front seat and in the rear passenger compartment. The lower floor is provided for by a reshaping of the frame side member. Clearance for the drive shaft in the body floor tunnel is provided by limiting the extent

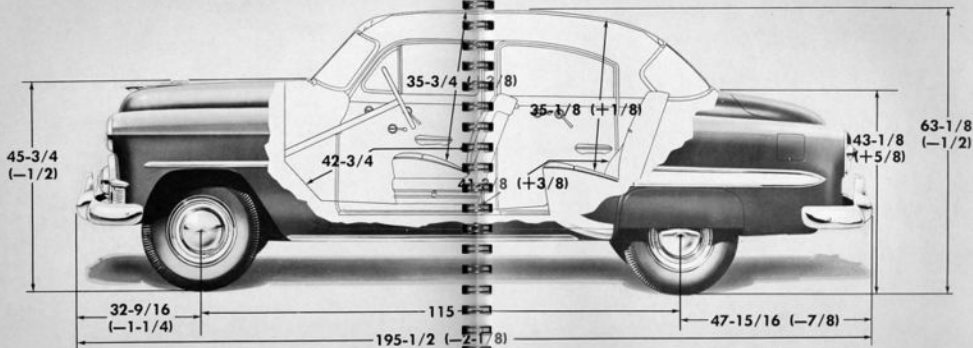
of rear axle movement. The new frame side member is lowered in the rear half of its central section and the spring bumper is of a heavier duty design and located farther forward in the kick-up. Axle travel on extreme jounce is limited but the normal ride remains unaffected.

**EXTERIOR DIMENSIONS.** A more compact bumper design shortens overall vehicle length. Although the wheelbase remains the same as in 1952, both the front and rear overhang are reduced.

The overall height of the car is decreased by a lower roof line. The new roof line is 1/2 inch closer to the belt line, which remains at the same average height above ground as in 1952.

The trim of the vehicle, in the side view, is better balanced. The front of the car is 1/2 inch lower and the rear is 1/2 inch higher. The belt and sill lines now are more nearly parallel with the ground, and the vehicle has a more level appearance under all loading conditions. Under the rear axle, ground clearance remains the same, and is lower





under the front cross member. The departure angle is increased and the approach angle remains the same.

The new exterior dimensions result in part from chassis changes. In the front suspension, the spindle boss is raised 1/4 inch on the steering knuckle support and the coil spring height is increased. These changes lower the front cross member 1/2

inch. The rear spring has a greater camber which raises the rear of the chassis 1/2 inch. A more equalized deflection of the front and rear suspension maintains an improved vehicle trim regardless of the passenger and luggage load carried. Since the front overhang is reduced, the same approach angle is retained even though the front of the chassis is closer to the ground. The departure angle is in-

creased by raising the chassis at the rear and reducing the rear overhang.

**OTHER MODELS.** The roof line-to-belt line dimension also is reduced in the club and business coupes but remains the same as 1952 for all other body styles. However, the spring specifications are not the same for all models, and the overall vehicle

height does not necessarily reflect the roof line-to-belt line relationship. Because of these factors, the design load height is 1/2 inch lower for the sedans, eight-passenger station wagon, club coupes and the business coupe, 1/4 inch lower for the sport coupes and convertibles, and the six-passenger station wagons are 1/4 inch higher than the 1952 station wagon.



## ENGINE AND CHASSIS

### 108 Horsepower Conventional Engine

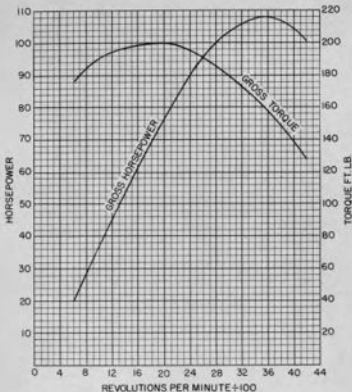
A larger displacement and higher compression ratio in the new engine for passenger cars with manual transmission gives greater output and better fuel economy without the need for premium fuel. The displacement is increased from 216.5 cubic inches to 235.5 cubic inches, and the compression ratio is raised from 6.6-to-1 to 7.1-to-1. This engine size was previously obtainable only in combination with the Powerglide automatic transmission. Maximum gross horsepower is raised to 108 from the previous 92. The greater output of the new, larger engine assures faster acceleration and better passing ability, higher top speed, and more miles of travel for the fuel consumed.

The 1953 engine has a stiffened crankshaft with stronger connecting rods and more rigid crankcase. Among the many new features in this engine are a more efficient cooling system, and an extensively revised electrical system to match the requirements of the higher compression ratio. The convenience of an automatic choke is added, making it regular equipment on all Chevrolet passenger cars.

The larger displacement increases the power output because more fuel-air mixture is drawn into the cylinders during the intake stroke, greater intake volume being provided by increasing the carburetor throat and intake valve diameters, and enlarging the cross-section of the intake ports and manifold passages. The exhaust ports and manifold, exhaust pipe and muffler also are larger to maintain exhaust silencing without increasing back pressure.

#### COMPARISON OF MAJOR SPECIFICATIONS

	1952	1953
Displacement	216.5 cu in	235.5 cu in
Bore	3-1/2 in	3-9/16 in
Stroke	3-3/4 in	3-15/16 in
Compression ratio	6.6:1	7.1:1
Gross horsepower	92 at 3400 rpm	108 at 3600 rpm
Gross torque	176 ft lb at 1000-2000 rpm	200 ft lb at 2000 rpm



Raising the compression ratio results in greater power development and improved fuel economy, because the expansion rate of the burning combustion mixture increases with the degree of compression before ignition. The higher compression ratio of the new engine is achieved by using a thinner cylinder head gasket and reducing the combustion chamber volume in the cylinder head. A transfer passage connects the combustion chamber to the cavity under the intake valve, preventing a delay in the ignition of the combustion mixture in this area. Consequently, the propagation of the flame is uniform and there is a smooth increase in the pressure rise as the combustion mixture burns. Because the combustion chamber is designed for high efficiency, the spark advance curve is revised so this high compression ratio engine can use regular grade gasoline. There is less spark advance when operating at or near full throttle in the lower half of the speed range--the operating condition in which detonation may become critical.

As the higher compression extracts more energy from the fuel consumed, it is a major factor in the improved fuel economy obtained. However, since greater power and torque result from the combination of the larger displacement and higher compression ratio, a numerically lower rear axle gear ratio of 3.7 to 1 is used. The previous rear axle ratio was 4.11 to 1. The engine speed relative to road speed is consequently reduced, contributing to greater gasoline mileage and increased engine durability, as well as permitting a higher vehicle top speed. At the same time, because of the greater pulling power of the engine, acceleration and hill climbing performance is maintained in the lower speed ranges and considerably improved with higher speeds.

In addition to its greater power, the redesigned 235 cubic inch engine incorporates numerous new features for improved operating smoothness and durability. The connecting rods are strengthened, and the crankshaft has certain contours and fillets

of the crank arms and crossover arms enlarged to increase rigidity. The counterweighting of the crankshaft also is increased, reducing the main bearing loads.

External ribbing is added at the crankcase, and the intermediate bearing bulkheads are thicker with increased ribbing. Cylinder head gasket durability is maintained by using three additional cylinder head attaching bolts.

**COOLING SYSTEM.** The cylinder water jacket is extended farther down on the right hand side of the case, in the region of the valve lifters, providing more complete and uniform cooling of the cylinder barrel. A water by-pass is included in the cooling system so there is always some circulation of coolant, providing faster warm-up and more uniform coolant temperature throughout the engine. This results in less wear and sludge deposit, favors exhaust valve life, and tends to improve low speed fuel economy.

**THE IGNITION SYSTEM.** In addition to the revision in the spark advance curve, the higher compression ratio requires other changes in the engine electrical equipment to provide higher voltage at the spark plug gap. Therefore, such features as spark plug nipples, high tower distributor, and a new distributor cam and breaker arm are provided to assure proper functioning of the ignition system. The neoprene compound nipples covering the spark plug terminals prevent electrical leakage at that point. Since they also protect spark plug terminals from moisture condensation, starting dependability in damp weather is improved. The high tower distributor cap presents a longer leakage path for the high voltage and thereby reduces losses in the high tension circuit.

The distributor has a new cam and breaker arm, providing longer dwell with the points closed, for greater core saturation in the ignition coil and higher voltage at the spark plug gap.

Higher compression results in more power per cubic inch of displacement, which means the releasing of more heat, and higher temperature within the combustion chamber. Consequently, a colder type of spark plug is used. This is the same spark plug as used in 1952 trucks and the 1953 passenger car engine for automatic transmission.

New non-metallic high tension cables replace the copper ignition wires. The new cable has a linen core which is impregnated with an electrical semi-conducting material; it is covered with a rubber coating and a neoprene outside jacket. The new high-resistance cable reduces interference with the car radio, and also with radio and television sets in the car's vicinity.

**AUTOMATIC CHOKE.** Ease and convenience of operation are improved with the incorporation of an automatic choke as regular equipment on all passenger cars in 1953. This automatic choke mechanism is the same type as was introduced in Powerglide

models at the beginning of the 1952 model year and later was added as an accessory for conventional passenger cars. With the automatic choke, starting and warm-up are always quick, smooth and easy. The richness of the mixture is regulated precisely according to the operating conditions. It relieves the driver of any care in choking the engine and prevents use of the choke when it is not needed. When the engine is started, the carburetor is automatically choked and a cam opens the throttle for fast idle. The choke gradually opens and the idle speed reduces as the engine warms up. Consequently, the carburetor is automatically regulated to supply the most efficient combustion mixture compatible with smooth, uninterrupted performance.

**A NARROWER BELT,** which operates more quietly and provides improved durability, drives the water pump and fan pulley and the generator.

**GENERATOR.** A new 45-ampere generator replaces the 37-ampere generator adopted in mid-season 1952. The new generator is the same in all exterior dimensions and uses the same mounts; it provides much greater reserve capacity to meet the requirements of lights and accessories, and lessens the chance of drawing on the battery under certain conditions of maximum electrical load.

A new voltage and current regulator assembly is provided to regulate the higher output of the new generator. Also, since the new rear axle ratio causes the engine to operate more slowly for a given car speed, generator speed is increased with respect to the engine speed by using a smaller diameter pulley on the generator.

**ENGINE REAR SUPPORT.** The engine rear support transmits less noise and vibration because the mount between the transmission rear bearing support and the frame cross member is softer.

**ACCELERATOR LINKAGE.** A bell-crank is installed on the toe pan to connect the engine carburetor linkage to the accelerator pedal. The pedal is better insulated from the reactions of the engine on its flexible mounts, and the short direct link to the new bell crank provides easier, smoother operation with a better pedal feel.

**FUEL TANK.** A new fuel gauge tank unit of the submerged type is used. The upper section of the fuel tank is reshaped and the gauge no longer mounts in a depression. The possibility of fuel leakage with a full tank is minimized by improving the seal design and reducing the head of fuel above it.

The filler neck diameter is increased to 2 inches from 1-3/8 inches; moreover it is now a one-piece pipe. The vent tube and filler signal are no longer provided since the filler neck has a continuous slope to the tank and the larger diameter permits a high rate of fuel entrance and air discharge. The filler neck cap is of the outside-cam-locking design, reducing the possibility of damage to the locking flange

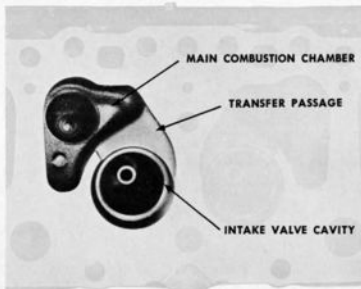
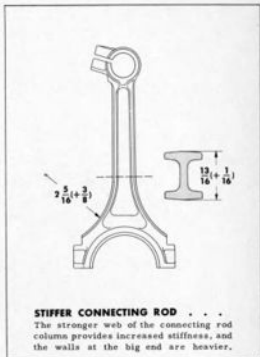
by careless handling of the pump nozzle by service station attendants.

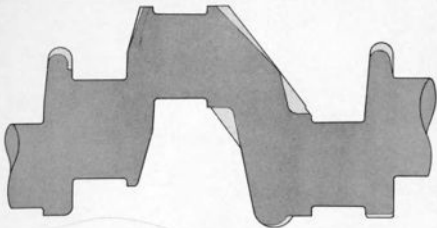
**EXHAUST SYSTEM.** The greater displacement of the new engine produces a larger volume of exhaust gases. Consequently, the cross-sections in the exhaust ports and manifold are increased, and a larger exhaust pipe and muffler are used. Exhaust silencing is maintained and the free flow of exhaust gases does not increase power-reducing back pressure.

The end 12 inches of the tail pipe are made from aluminized steel for additional durability. The exhaust gases cool as they travel through the exhaust system and tend to condense near the end of the tail pipe. Aluminized steel is less subject to corrosion and the tail pipe service life is extended by minimizing the effects of rust damage.

#### **COMBUSTION CHAMBER . . .**

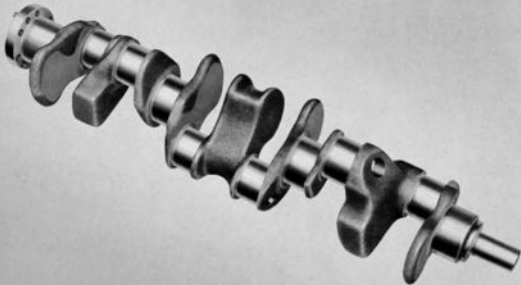
The cylinder head has a more compact combustion chamber volume for a higher compression ratio. A transfer passage connects the cavity at the intake valve head to the main combustion chamber for more uniform burning of the fuel charge.



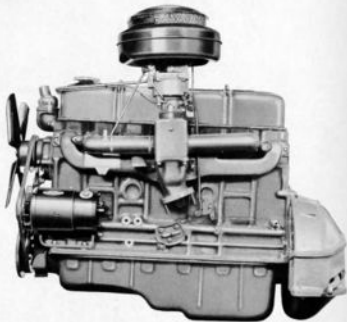
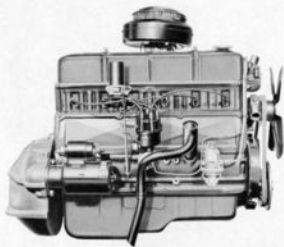


**MORE RIGID CRANKSHAFT . . .**

Crankshaft stiffness is increased by changes in the fillets and crank arm thickness. Counterweighting also is increased to reduce the main bearing loads. The light toned areas show where material is added.







#### **STIFFER CYLINDER BLOCK . . .**

The cylinder block is strengthened by a thicker bottom flange and an increase in the ribbing cast in the walls. Both sides have an additional longitudinal reinforcement in the crankcase section; these ribs are formed in the outside of the walls and run the full length of the casting. On the left side, short vertical ribs join the flange, longitudinal reinforcement and the wall about the oil gallery. The vertical ribs of the casting wall in the cylinder section are longer on this side, and the two on either side of the forward core hole plug are joined by a short horizontal reinforcement.



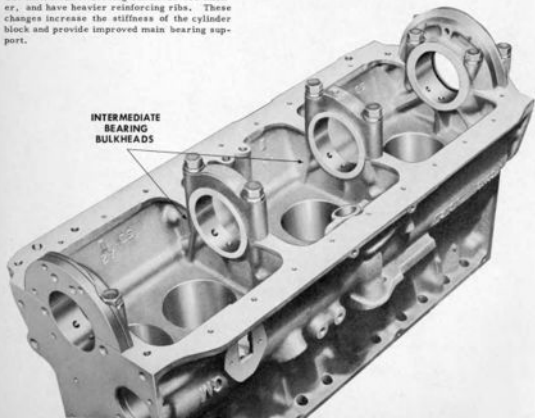
ADDED HEAD BOLTS

#### CYLINDER HEAD BOLTS . . .

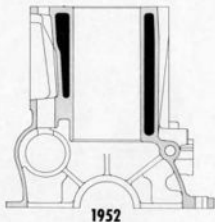
Three bolts are added along the cylinder head centerline to stiffen the assembly and maintain gasket durability.

#### BEARING BULKHEADS . . .

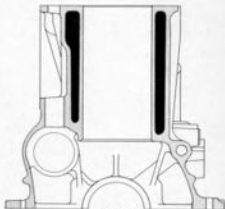
The intermediate bearing bulkheads are thicker, and have heavier reinforcing ribs. These changes increase the stiffness of the cylinder block and provide improved main bearing support.



INTERMEDIATE  
BEARING  
BULKHEADS



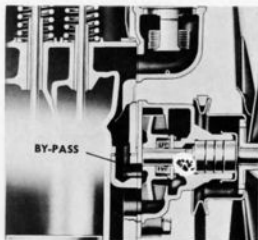
1952



1953

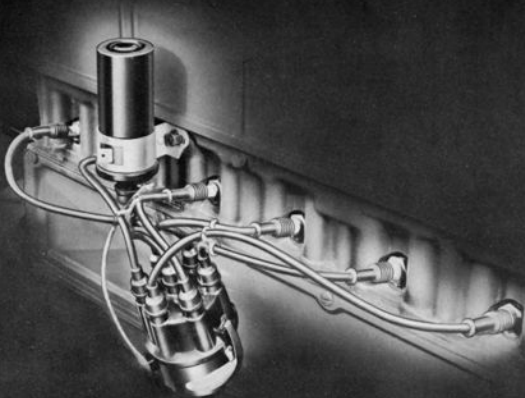
#### **WATER JACKET . . .**

The cylinder walls are more uniformly cooled by lengthening the water jacket on the push rod side of the cylinder block.



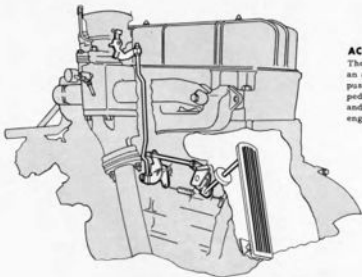
#### **WATER BY-PASS . . .**

The cooling system is more efficient. A water by-pass is added at the front of the cylinder block. The water pump now circulates the cooling solution through the cylinder block jacket and head before the thermostat opens. Local hot spots are prevented and exhaust valve life is improved. The engine now reaches operating temperature more quickly and a more uniform temperature is maintained throughout the engine cooling system. The lubricating oil is warmed faster during cold weather driving and the formation of sludge is reduced.



#### **IGNITION SYSTEM . . .**

The high tower distributor improves the insulation of the ignition system, and the high resistance ignition cables prevent radiation of radio frequency interference. Nylon wire retainers separate the high tension cables to prevent cross-jumping of the high voltage surges. Neoprene compound nipples on the cable ends assist damp weather starting by preventing moisture from shorting the spark plugs.

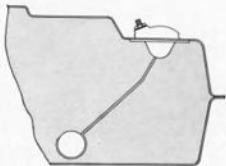


#### ACCELERATOR LINKAGE . . .

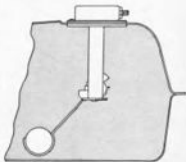
The accelerator linkage now includes an additional bell crank, and a shorter push rod connects to the accelerator pedal. Smoother control is provided and the pedal is better insulated from engine vibrations.

#### FUEL GAUGE TANK UNIT . . .

There is less possibility of fuel leakage at the gauge unit. The new assembly is installed higher on the tank and uses an improved seal design. When the tank is full, there is a lower head of fuel above the mounting flange and pressure against the seal is reduced.



1952



1953



1952



1953

#### **FILLER NECK . . .**

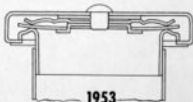
The new filler neck is a one-piece, rigid pipe which replaces a three-element, semi-flexible design. The larger diameter of the new neck permits rapid filling without the need for a vent pipe.

#### **FUEL TANK FILLER CAP . . .**

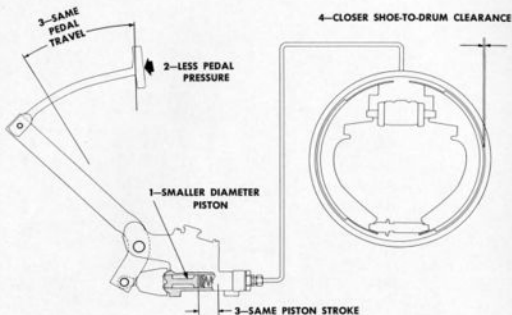
The filler neck locking flange is less subject to damage by a carelessly handled gasoline pump nozzle. The inside diameter of the neck is smooth and the cap is of the outside-cam locking design.



1952

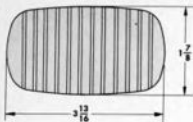


1953



#### IMPROVED BRAKES . . .

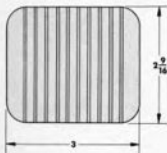
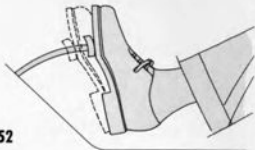
1. The diameter of the brake main cylinder piston is reduced.
2. Consequently, less pedal pressure is required to produce the same line pressure to the wheel cylinders.
3. Since the piston stroke and pedal travel remain the same, less hydraulic fluid is displaced for moving the wheel cylinder pistons.
4. However, because of the closer shoe to drum clearance, less wheel cylinder piston movement is required to bring them into contact.



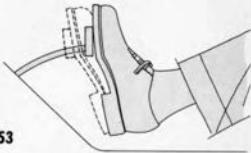
1952

#### PEDAL PADS . . .

The flat face of the pedal provides a better pressure feel. The driver's shoe first contacts the upper edge of the pad, and the pressure is spread over an increasing pad area as the pedal is further depressed.



1953



#### Chassis Improvements

**BRAKES.** The new cars stop more smoothly and with less effort. Initial pedal feel is softer, and the foot pressure on the pedal better regulates the speed of the stop. To obtain these features the main cylinder diameter is reduced from one inch to 7/8 inch and the brake shoes moved closer to the drums.

The shoes are brought into contact with the drums to begin the brake application with less displacement of the brake fluid, and the pressure at the wheel cylinders increases more gradually as the pedal is further depressed. The same amount of pedal pressure used in 1952 now produces 30 per cent greater line pressure, so an equal wheel cylinder pressure is obtained with 23 per cent less pedal effort. Because this reduced effort is spread over a greater portion of the pedal travel, control of deceleration is more responsive to changes in foot pressure.

**PEDALS.** The brake pedal operation is smoother and has a better feel in 1953. The pedal pad has an increased tilt towards the vertical, and is narrower and deeper across the face which is flat instead of curved.

When foot pressure is applied, the upper edge of the pad is first contacted and the sole of the driver's shoe progressively covers more of the pad face as pressure is increased.

The pedal movement is controlled more smoothly because the foot leverage varies with the pressure being applied. There is a more comfortable pedal feel on full application because the pressure is more uniformly distributed across the sole of the driver's shoe by the increased contact area of the flat pad.

The clutch pedal also is redesigned and has the same features provided by the new brake pedal.



THE RIDE QUALITY of the new car is substantially improved. The ride is softer, vehicle toss, or pitch, is reduced, and the car occupants are better insulated from road roughness.

The deflection rate of the front coil springs is reduced from 340 pounds per inch to 300 pounds per inch, which reduces the deflection rate at the front wheels from 125 pounds per inch to 110 pounds per inch.

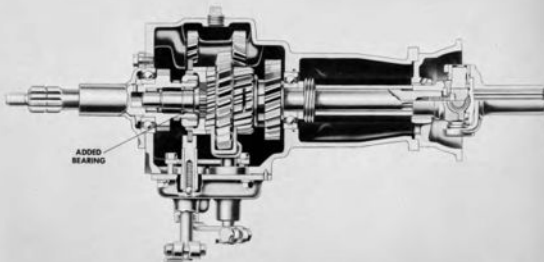
The front shock absorbers are redesigned to react more smoothly and easily with the softer front springs. Both the compression and rebound orifices are larger, reducing the resistance to piston movement. The shock absorbers begin to compress with less initial pressure, the resistance to the piston movement varying more smoothly with increasing compression force. This feature is obtained by adding a slight taper to the seat applying the relief spring pressure to the relief valve plate covering the intake orifices to the upper chamber. The thin relief valve plate has clearance for deflecting above these orifices and allows a fluid flow before the pressure is great enough to compress the relief spring and lift the valve plate off the piston.

The total effect of the shock absorber changes is lessened resistance to the spring deflection and a more uniform rate of spring movement. The combination of spring and shock absorber changes provides easier, smoother suspension action.

The deflection rate of the rear springs is reduced on all but the station wagon models. The higher 1952 spring rate is retained for these later models to support the heavier load they impose on the rear axle. The rear shock absorbers are redesigned to provide a softer ride for all models. The compression orifices are increased and the relief spring seat is tapered for a smoother, easier compression stroke. However, the rebound orifices remain the same size as in 1952. The combined effect of the new springs and shock absorbers provide a softer rear suspension response with a more uniform deflection rate.

Additional vehicle changes are made which influence the overall ride. The ratio of sprung to unsprung weight is increased. The greater mass of the sprung weight has less reaction to forces developed by motion of the unsprung masses. The increased vehicle weight and reduced suspension spring rate relationship lowers the frequency of the vibrations transmitted to the body by road irregularities. Consequently, passenger compartment reactions to the suspension action are reduced in both amplitude and frequency, providing improved passenger comfort.

The increased vehicle weight and lower height of the frame above ground improve lateral stability and reduce vehicle pitch by lowering the center of gravity.



**STEERING EFFORT.** Needle bearings replace plain bronze bushings at both ends of the pitman shaft, providing reduced steering effort and improving the steering gear for smoother, easier operation and greater durability.

The needle bearings reduce friction, decreasing the steering effort needed to turn the wheels, and their rolling action insures a smoother pitman shaft rotation. Because the new bearings readily admit the lubricant to penetrate and wipe the full length of the bearing surfaces, there is greater freedom from scoring, bearing wear and binding. This permits the use of harder bearing surfaces and, consequently, the life of the steering gear is extended.

The steering wheel rim has a more comfortable finger grip pattern and the increase in wheel diameter from 17-1/4 to 18 inches further reduces steering effort by increasing the leverage.

**TRANSMISSION.** The possibility of unintentional high gear disengagement is reduced in the three-speed synchro-mesh transmission. The length of the mainshaft pilot end is increased and a row of needle bearings is added. The former needle-type pilot bearing is retained at the shaft end, and the additional bearing is located closer to the mainshaft clutch spline. The mainshaft is more rigidly supported by these two rows of needle bearings and deflects less under load.

#### **STEERING GEAR . . .**

Needle bearings are used at both ends of the pitman shaft, in place of bronze bushings, providing smoother steering and improving the steering gear durability.

#### **THREE SPEED TRANSMISSION . .**

The transmission mainshaft has increased support to reduce deflection and minimize high gear disengagement under loads. This added stiffness is provided by an extra row of needle bearings.

**THE FRAME SIDE MEMBERS** are reshaped to provide the new cars with a lower floor line. This change lowers the rear half of the central straight section of the member and reduces the height of the kick-up immediately above and to the rear of the rear axle centerline. Additional frame changes are made in all models to facilitate the removal and replacement of the Powerglide transmission if required during servicing. The lower flange on the left hand X-member in the convertible frame has a small cut-out to provide passage clearance for the automatic transmission. In all other frames, bolts now replace rivets for attaching the second cross member to the side members and braces. Removal of the member is simplified by rerouting the brake main pipe over the frame in this area.

**REAR AXLE.** The 'W' type, or inside-out thrust bearing originally used on the pinion shaft in the taxi-cab rear axle was released for all cars during 1952, and is continued for 1953. This is a double-row ball bearing in which the cross section of the inner race is strengthened by the separating rib. The stress on the balls is not altered by installation since there is less possibility of distorting the race when the pinion nut is tightened. The design of the bearing permits a higher degree of misalignment without being overstressed, and the load carrying capacity is increased.

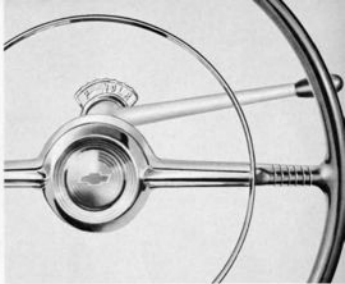


#### POWERGLIDE INDICATOR . . .

The Powerglide control indicator and dial are new in appearance to harmonize with the styling of the other instruments and controls.

Again of quadrant shape, the clear plastic dial forms a pleasing background for the molded-in, block-style letters filled with white paint. The letter, P, followed by six square dots is substituted for the word, Park, but selector position designations otherwise are unchanged. A decorative rim of bright metal is added on the sides and across the top of the dial.

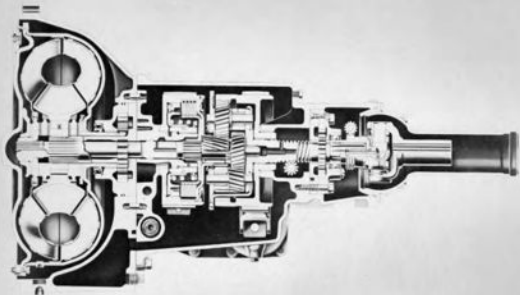
The pointer is a white arrowhead located behind the dial. It replaces the taller indicator which extended above the dial.



#### POWERGLIDE EMBLEM . . .

All models equipped with the automatic transmission, with the exception of station wagons, are identified by the name, Powerglide, cast in the wings of the rear deck emblem.

The combination of the Powerglide transmission, 115 horsepower engine and 3.55-to-1 ratio rear axle is optional at extra cost on all Two-Ten and Bel Air models.



## EXTRA-COST EQUIPMENT

### Powerglide Automatic Transmission

Driving convenience with the Powerglide automatic transmission is even greater in 1953 with the addition of a new automatic shift mechanism which provides Drive with a low and cruising range. In combination with a new 115 horsepower engine, the new Powerglide offers finer vehicle performance with greater operating economy.

The flexibility of operation in Drive is extended to supply faster, more positive pick-up from starts, higher acceleration at traffic speeds, and increased power for hill climbing or heavy going in mud, sand, or snow. Car speed and load requirements control the operation of the automatic shift which contributes to high fuel economy by minimizing the possibility of engine racing or overloading.

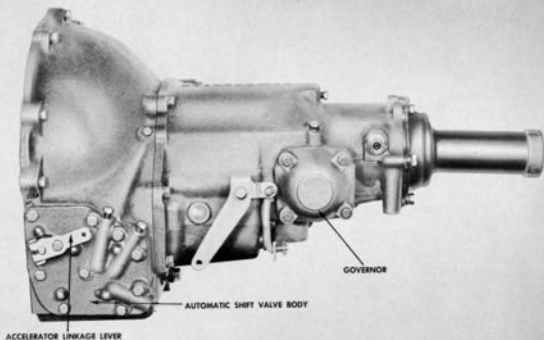
In operation, the car, moving forward in Drive from a standstill, is in low range and upshifts to the cruising range as speed is attained. Because the automatic shift mechanism is linked to the throttle, the point at which the upshift occurs varies with the pressure on the accelerator pedal. Thus, with the accelerator held at the floor, acceleration in low range will continue up to about 40 miles per hour,

The more powerful engine provides an adequate reserve of power at cruising speeds, so an upshift occurs at this point, before engine speed becomes excessive.

Downshifts from cruising range are instantly available when fast acceleration or extra power are needed at traffic speeds. Below approximately 40 miles per hour, the transmission will shift from cruising range to low range if the accelerator is fully depressed. At lower speeds, the downshift will occur at less than full throttle, and with the throttle closed, as when slowing to a stop, the downshift takes place at about ten miles per hour.

Manual Low is retained to provide extra braking against engine compression when required and to prevent upshifting during slow or slippery driving conditions.

A larger, more efficient three-element torque converter is used and the overrun coupling is eliminated. The new converter provides improved cruising economy and retains the braking and low-speed, push-starting characteristics of the previous five-element design.



#### **AUTOMATIC SHIFT . . .**

The low and cruising ranges in Drive are provided by incorporating an automatic shift valve, throttle valve and governor in the new Powerglide transmission.

The automatic shift valve body contains the automatic shift valve and also the throttle valve which makes the automatic shift sensitive to engine loading.

The governor which makes the automatic shift sensitive to road speed, is driven by the transmission mainshaft.

The accelerator linkage lever controls the throttle valve operation and connects to the accelerator pedal linkage.



**TURBINE**



**STATOR**



**PUMP**

#### **TORQUE CONVERTER . . .**

A larger, more efficient three-element torque converter replaces the previous five-element design. The new converter maintains the low-speed, push-starting and engine braking characteristics of the former design without using an overrun coupling.

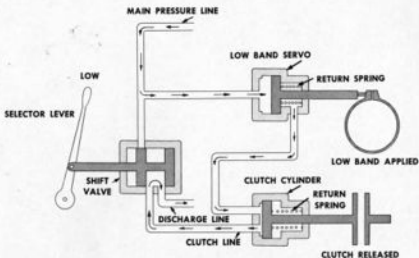
The new pump and turbine assemblies are fabricated from pressed metal. The vanes have tabs that fit into slots in the inside and outside shells. After they are inserted, the tabs are spun flat to hold the assembly together. The aluminum stator assembly has air-foil shaped vanes cast integrally with its center hub and a wide concave ring is welded on the outside ends of the vanes to complete its assembly. All the elements in the previous converter design were fabricated from pressed metal and brazed together.

The new Powerglide transmission uses the same basic components as the previous design and has the same manual selector positions. The low range in Drive has the same ratio as the manual Low, and the cruising range is the same as the previous Drive. The low band is used more frequently in the automatic shift Powerglide and is redesigned for increased durability and better drum contact. The friction surface is wider and the metal band is made of steel instead of malleable cast iron.

The automatic shift feature is provided by incorporating an automatic shift valve in the hydraulic

circuit used in Drive. Vehicle speed and engine loading control the operation of this valve for selecting the appropriate range. The actuation of the low and cruising range in Drive is the same as that caused by the manual selection of Low or Drive in the 1952 Powerglide. The control of oil pressure to the high clutch applies or releases the clutch and low band so the planetary gears are either used or by-passed when the car is in forward motion.

Following are simplified diagrams showing the hydraulic circuits and mechanical motion resulting from movement of the shift valve.

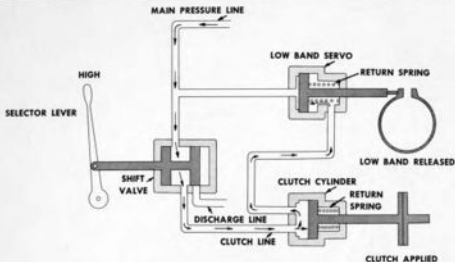


#### LOW RANGE SELECTION . . .

Oil pressure enters the low band servo, compressing the return spring as the piston moves to apply the low band. The groove in the shift valve spool connects the clutch cylinder with a discharge opening to the sump. Any fluid in the return spring chamber of the low servo moves through the clutch cylinder and out this discharge port. The low band is now applied and the return spring in the clutch cylinder holds the clutch plates separated.

#### THE GOVERNOR



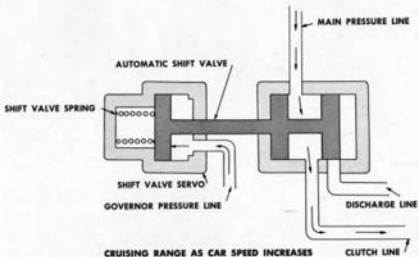
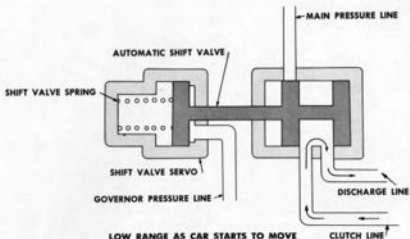


#### HIGH RANGE SELECTION . . .

If the shift valve is moved to the high range, the groove in the shift valve opens the clutch line to oil pressure and the discharge port is closed. Oil pressure now compresses the return spring in the clutch cylinder and brings the clutch plates into contact. This same oil pressure also enters the return spring side of the low servo, where it balances the oil pressure compressing its spring, and the force of the spring moves the piston and releases the low band.

In the previous Powerglide, the valve controlling the flow of oil pressure was operated by moving the selector lever to Low or Drive. In the 1953 Powerglide, the selection of Drive directs oil pressure to an automatic shift valve, the relative position of which is controlled by opposing hydraulic pressures. This is accomplished by providing the new shift valve with a piston operating in a cylinder, and applying speed sensitive pressure at one end and load sensitive pressure at the other. Speed sensitive hydraulic pressure is produced by the transmission rear pump and is regulated by a governor controlled valve. As the vehicle begins to move, oil pressure is developed by the rear pump and the pressure it passes to the shift valve piston is controlled by a governor driven by the transmission mainshaft.





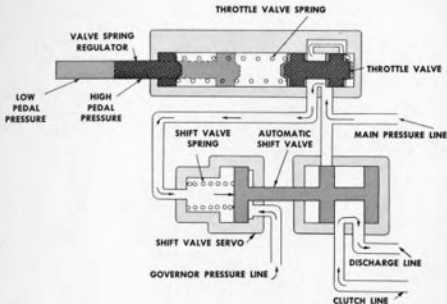
#### SHIFT VALVE OPERATION . . .

A spring presses against the piston head, holding the automatic shift valve in the low range as the vehicle begins to move. As the vehicle speed increases, the pressure passed by the governor becomes greater and opposes the force of this spring. When the hydraulic pressure through the governor valve is high enough, the piston spring is compressed and the shift valve moves to the high or cruising range.

However, extra power is sometimes needed after the vehicle begins to move. Rapid pick-up after a start, sudden acceleration for passing in traffic, or travelling up a hill, requires high power at speeds where pressure is being passed by the governor to the shift valve piston.

A load sensitive hydraulic pressure is added to the force of the shift valve piston spring so that low

range can be used to obtain the transmission gear multiplication for these power demands. Pressure from the main hydraulic line in the transmission is regulated by the accelerator pedal to supply an additional force opposing the governor pressure. A throttle valve, controlled by linkage to the accelerator pedal, passes increasing main line pressure to the shift valve piston as the pedal is depressed.



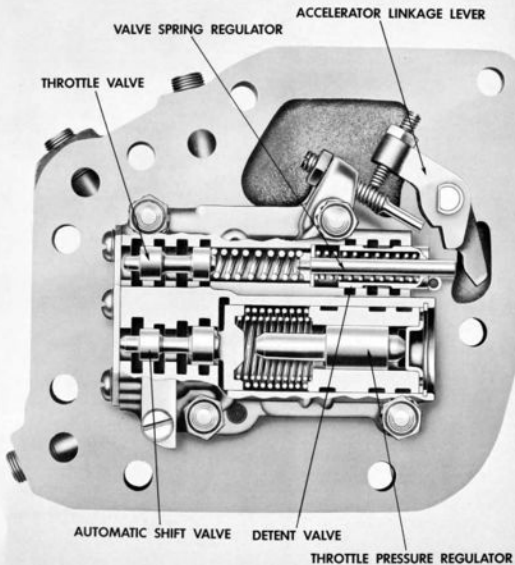
#### THROTTLE VALVE OPERATION . . .

The throttle valve consists of a spool having two lands separated by a groove. This spool operates in a body having ports which open to the main line and to the shift valve piston.

A spring holds the throttle valve spool in a position where its groove connects the main line to the shift valve piston line. Main line oil pressure also is channelled into a cavity behind the valve, increasing the area on which it acts. As a result, the entrance of main line pressure tends to move the throttle valve against its spring, restricting the pressure passed to the shift valve piston. A plunger, linked to the throttle plate, regulates the spring force that opposes the main line pressure from moving the valve spool. Consequently, as the accelerator pedal is depressed, increasing main line pressure is passed by the throttle valve to oppose the governor pressure on the shift valve piston. Therefore, a higher vehicle speed is required before pressure from the rear pump can effect an upshift.

# **AUTOMATIC SHIFT VALVE BODY**

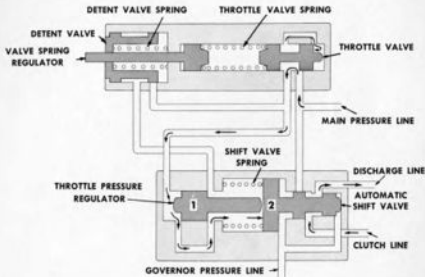
**(INSIDE VIEW)**



The preceding diagrams illustrate the basic principles incorporated in the automatic shift Power-glide. However, smoothness of operation, simplicity of manufacture, and the provision of a forced downshift modify the construction of the valves and valve bodies in the actual transmission.

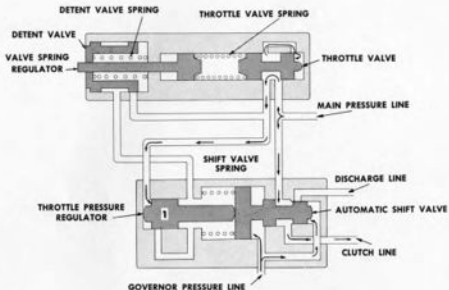
The main line pressure regulated by the throttle valve to the shift valve piston is regulated by a plunger in the shift valve body. Instead of using

a piston operating in a separate cylinder for controlling the shift valve position, the piston is machined on the end of the valve spool. Governor pressure is channelled to the end of the shift valve spool to increase the valve area against which it acts. In addition, the throttle valve spring regulator slides in a spring loaded detent valve. The following diagrams include the added components required to complete the actual hydraulic circuits for 1953.



#### LOW RANGE AS CAR STARTS TO MOVE . . .

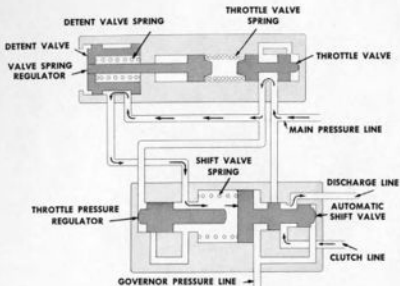
As the vehicle starts to move, main line pressure passed by the throttle valve moves regulator (1) towards the shift valve (2) and uncovers a channel admitting the pressure from the throttle valve to the shift valve piston. This pressure added to the spring force against the piston head holds the shift valve in the low range.



#### CRUISING RANGE AS CAR SPEED INCREASES . . .

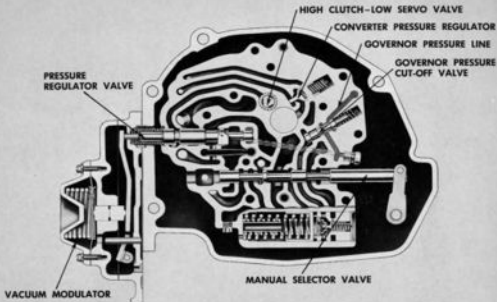
As the vehicle speed increases, higher pressure is passed by the governor, and when it becomes great enough to counterbalance the forces on the piston head, the shift valve moves to the cruising range. The piston head then butts against the regulator (1) and closes off the channel bringing pressure from the throttle valve to the piston head. This reduces the area against which the pressure from the throttle valve acts. Consequently, there is a large reduction in the forces opposing the pressure through the governor. Only a large reduction in governor pressure, or a large increase in pressure from the main line will return the shift valve to the low range.

If the vehicle speed is reduced appreciably lower than where the upshift occurred, decreased pressure from the governor will be counterbalanced by the pressure through the throttle valve imposed on the end of the regulator. The regulator pressing on the piston head moves the shift valve, opening the channel to the piston head and admitting the throttle valve pressure to oppose the pressure from the governor across the whole head of the piston. The shift valve is now held in low range.



#### **LOW RANGE WITH DETENT VALVE DEPRESSED . . .**

Even if the vehicle speed is not reduced, a forced downshift can be made at speeds up to approximately 40 mph. This is accomplished by depressing the accelerator pedal all the way. As the accelerator pedal approaches the end of its travel, the shaft of the spring regulator for the throttle valve is flush with the detent valve in which it slides. Further pressure will compress the detent valve spring, and a groove in the valve opens the main line pressure directly to the shift valve piston head. The larger area against which the main line pressure now acts increases the forces opposing the governor pressure and moves the shift valve to the low range.



#### MAIN VALVE BODY CHANGES . . .

A high clutch-low servo valve is added to cushion a low throttle downshift such as occurs when the car slows to a stop. The valve lifts off its seat to allow a more rapid downshift at higher speeds.

When the manual selector is placed in Low or Reverse, the governor pressure cut-off valve is forced against its spring and cuts off the governor pressure to the cavity at the end of the pressure regulator valve.

The converter pressure regulator valve protects the new torque converter from being supplied with excessively high hydraulic pressure.

The pressure regulator valve performs the same regulation of the main hydraulic system oil pressure as in the previous Powerglide. However, governor pressure is now supplied to the cavity at the inner end of the valve.

The movement of the shift valve to the cruising or the low position is rapid, and it is firmly held in either of these locations. This feature prevents slipping of the clutch plates or dragging of the low band and provides better durability to their facings.

The shift valve begins to move as soon as there is a slight advantage in one of the opposing forces controlling its position. If the transmission has been operating in the low range, the shift valve groove admits pressure from the main line to the clutch cylinder as soon as the valve spool begins to move. This main line pressure also presses against the walls at each end of the shift valve groove, and since the area nearest the piston end of the valve is the larger, the force against it is the greater. The valve movement is accelerated by this additional force. If the valve begins to move from the cruising to the low range, the pressure in the groove is discharged to the sump and the sudden release of this holding force accelerates the valve movement to the low range.

Since the area against which the pressure from the throttle valve acts increases or decreases depending upon the shift valve position, the movement of the shift valve causes a large difference in the magnitudes of the opposing forces controlling its position. Consequently, the shift valve does not move back and forth, or "hunt", at speeds slightly above or below the point where a shift occurs.

The effect of typical accelerator pedal positions on automatic shift points is tabulated below.

THE MAIN VALVE BODY is redesigned. The manual selector valve, and the regulators for the main hydraulic circuits are still retained in this body. Additional valves and feed lines now are included to provide smoothness to the automatic shift action and to limit the pressure fed to the new design torque converter.

Softer shifting at high speeds is provided by making the main line oil pressure sensitive to vehicle speed. Governor pressure is applied to the pressure regulator valve in Drive for this purpose. The vacuum modulator is retained from the previous Powerglide design and moves the pressure regulator valve to supply a lower main line pressure with low engine loading in Drive. The governor pressure lowers the main line pressure at high speeds. If the engine is heavily loaded for a forced downshift, the vacuum modulator tends to move the pressure regulator valve for a higher main line pressure. This action is opposed by the governor pressure so that the low band is not applied too drastically as the shift valve moves to the low range.

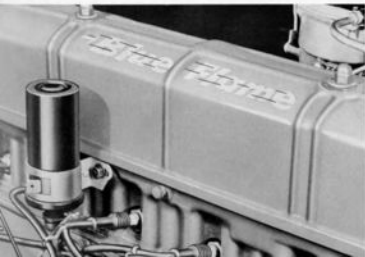
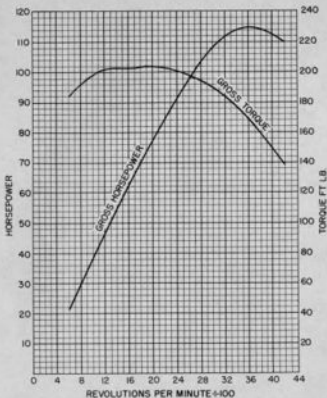
Governor modulation of the main line pressure also provides smoother upshifting at low throttle by reducing the line pressure for a softer clutch application.

The vacuum modulator is inoperative and the governor pressure is cut off when the selector lever is placed in Low or Reverse since a higher main line pressure is required in these positions for a firm band application.

#### REPRESENTATIVE SHIFT POINTS

Accelerator pedal pressure	Approximate car speed (miles per hour)	
	Upshift	Downshift
Low.....	10-1/2	9
High (at detent).....	29	16-1/2
High (through detent).....	42	37





#### BLUE FLAME . . .

The 115 horsepower engine furnished with the Powerglide transmission is finished in blue enamel instead of the usual gray color. The identifying name, Blue Flame, in white letters with speed lines in red, is located on top of the valve rocker cover.



### 115 Horsepower Blue Flame Engine

A new engine with greater power and fuel economy is supplied in the 1953 Powerglide-equipped passenger cars. These cars have better pick-up and passing ability, higher top speed, and give more miles of travel for each gallon of gasoline consumed because of the improvements in the transmission and engine.

The engine for the automatic transmission cars has the following new features:

- Greater horsepower
- Higher torque
- Lower specific fuel consumption
- Higher compression ratio
- Improved ignition system
- Easier damp weather starting
- Reduced radio and television interference
- Aluminum pistons
- Stiffer, narrower journal connecting rods
- Stiffer, narrower main bearing caps
- Stiffer crankshaft
- Stronger, stiffer crankcase
- New, long life, low friction insert bearings
- Full pressure lubrication
- By-pass cooling
- Larger capacity generator
- More durable, quieter, narrow fan belt

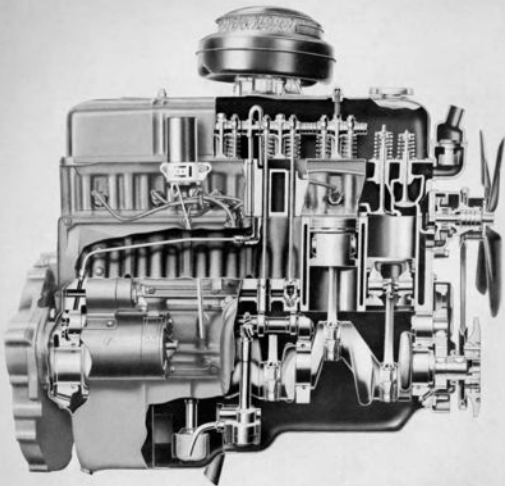
Called the Blue Flame, the new engine develops a maximum power of 115 horsepower and a maximum torque of 204 ft lb. Because of the efficiency of the new engine's combustion chamber, full power

rating can be obtained in this high compression ratio engine with regular gasoline.

With the increase in compression ratio extracting more energy from the fuel consumed, greater engine horsepower is developed, resulting in improved fuel economy.

#### COMPARISON OF MAJOR SPECIFICATIONS

	<u>1952</u>	<u>1953</u>
Displacement	235.5 cu in	235.5 cu in
Compression Ratio	6.7:1	7.5:1
Gross Horsepower	105 hp at 3600 rpm	115 hp at 3600 rpm
Gross Torque	193 ft lb at 2000 rpm	204 ft lb at 2000 rpm
Lubrication	Pressure-stream	Full pressure
Conn. Rod Bearings	Cast-in-rod	Insert
Pistons	Cast Iron	Aluminum



**IMPROVED STRUCTURE.** Together with increased power, the new engine has numerous new structural features for improved smoothness and durability.

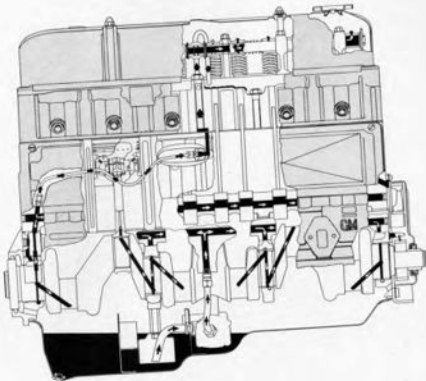
External ribbing is added at the crankcase and the intermediate bearing bulkheads are thicker and have increased ribbing. Cylinder head gasket durability is maintained by using three additional cylinder head attaching bolts.

The crankshaft is made more rigid by using thicker crank arms and crossover arms. The same compact engine size is maintained by retaining the same cylinder bore centerline spacing. However, as the crankshaft bearing centers remain the same,

even though the crankshaft arms are thicker, narrow bearings are used, and the connecting rod big ends and main bearing caps are stiffer and have reduced width.

The main and connecting rod bearings used are of the steel-backed, thin-wall, precision interchangeable insert type. The bearings have greater load carrying capacity and improved fatigue resistance.

**LUBRICATION.** For adequate cooling and lubrication, the insert type bearings require constant, high volume oil flow at full pressure. Consequently, this new engine has a full pressure oiling system

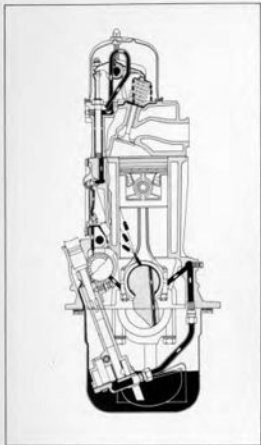


#### FULL PRESSURE LUBRICATION SYSTEM . . .

Oil from the pump flows into the main oil gallery and is distributed to each of the main bearings. The crankshaft is drilled from the main bearing journals, through the crank arms and into the crank throws to lubricate the connecting rod bearings. The big end of the connecting rod has a radial hole to its column base which intersects the bearing supply feed once each revolution and throws a jet of oil against the cylinder wall. The main bearings also feed oil to each of the camshaft bearings, and the rear camshaft bearing connects into the hydraulic valve lifter oil gallery. Oil to the rocker arms is supplied from the rear of this gallery, and the timing gear lubrication is obtained from its front end. The rocker arm oil supply line attaches with a metering connector to the rear of the valve lifter gallery and also to a hole drilled near the top of the cylinder casting.

Another hole is drilled from the top of the cylinder block to intersect this passage, and a cut-out in the head gasket connects it to an adjacent cylinder head bolt hole. A short hole is drilled from the top of the cylinder head and is intersected by a drilling from the bolt hole. Because the shank of the head bolt is smaller than the hole in which it fits, an oil passage is provided to the top of the cylinder head. A looped pipe extends this oil line to the inner ends of the rocker arm shafts, and surplus oil is discharged from the open end of the pipe.

Lubrication of the valve train and oil pump drive gears remains the same as previously, using the oil that flows through the top of the rocker arm and the gravity feed back to the crankcase. Wrist pin lubrication is again provided by oil fed through the piston by the oil control ring.



instead of the pressure stream system used in the conventional engine. The oil pump gears are wider so that adequate lubrication will be available for the life of the engine, and oil is supplied under greater pressure, because of a different method of pressure dissipation.

Oil is fed to each of the four main bearings from an oil gallery, as in the 1952 engine. The crankshaft is drilled so that oil is fed from the main bearings to the connecting rod bearings.

The front main bearing supplies the front connecting rod bearing; the second main bearing feeds the second and third rod bearings; the third main bearing feeds the fourth and fifth rod bearings, and the rear main bearing supplies the rear connecting rod bearing.

Piston slap during cold engine starting conditions and the possibility of piston scuffing are avoided by drilling a hole in each rod which registers with the drilled hole in the crankpin journal and squirts a jet of oil against the cylinder wall thrust face.

**ALUMINUM PISTONS** with their greater heat conducting property are used in this higher compression engine. The durability of the narrower crankshaft bearings also is increased because the lighter pistons impose lower reciprocating loads. These pistons have cam ground skirts with steel struts to control expansion.

These features provide low clearance on thrust faces of the piston skirt when the engine is cold and maintain substantially uniform low clearance all around the skirt when the engine reaches operating temperature. Scoring of the softer piston material is eliminated by tin plating the pistons. No piston pin bushings are used since the aluminum itself is an adequate bearing material. The oil control ring is backed up by a steel expander ring which assures lasting oil control under a wide range of temperature and operating conditions.

**7.5-TO-1 COMPRESSION RATIO.** The dimension from the wrist pin to the top of the piston head is increased. This brings the piston head closer to the cylinder head at the end of the compression stroke, thereby increasing the compression ratio. The intake valve has been raised to maintain clearance between the valve and piston.

The new intake valve has a 1/16 inch smaller head diameter so there is less shrouding of the valve by the cylinder wall. The breathing efficiency of the engine is improved since the combustion mixture flows more freely into the cylinder.

This engine uses the same cylinder head as installed in the new engine for the manual transmission cars thus simplifying service parts supply. The principal differences in the design of the 1952 and 1953 heads are the changes in combustion chamber volume and the transfer passage to the intake valve cavity. The reduced combustion chamber cavity in the 1953 head increases the compression ratio and the transfer passage is narrower. The flame propagation is uniformly progressive from a more compact area, providing a smooth rise in pressure during the power stroke.

**OTHER CHANGES.** The throttle return check is no longer used on the carburetor because the Powerglide transmission now automatically downshifts and reduces the engine loading as the vehicle slows to a stop. Consequently, the possibility of the engine stalling is reduced and the engine now returns to idling speed as soon as the vehicle is brought to a stop and foot pressure is removed from the accelerator pedal. This immediate return to idling speed reduces the possibility of vehicle creep.

The new engine for the Powerglide power train incorporates the improvements made in the 1953 standard engine cooling system and has the same new 45 ampere generator and regulator. All the changes made in the ignition system also are included with the exception that the spark advance curve is modified to a greater degree to provide detonation-free operation when using regular gasoline with the 7.5-to-1 compression ratio.



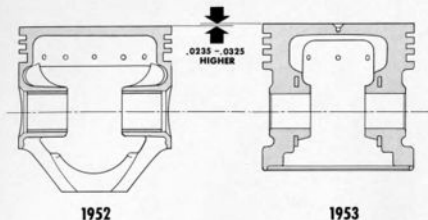
1952



1953

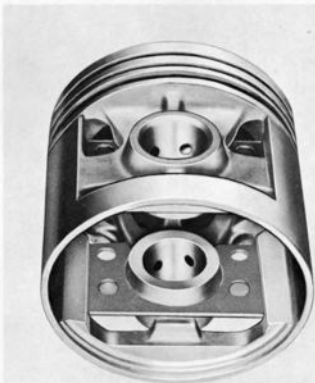
**CYLINDER HEAD . . .**

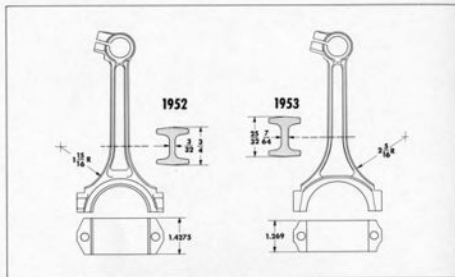
The new cylinder head has a smaller combustion chamber volume and the width of the transfer passage is reduced for a higher compression ratio. Three more head bolts are used for attaching the head to the cylinder block, increasing the assembly stiffness and maintaining head gasket durability.



#### ALUMINUM PISTONS . . .

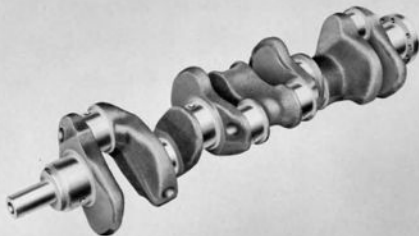
The light weight aluminum piston uses three rings. Steel struts are cast in the piston walls to control expansion. Wrist pin lubrication is provided by oil fed through the piston from the oil control ring. Bushings are not required for the wrist pin since the piston material has adequate bearing characteristics. The new piston is shorter in overall height, but the distance from the wrist pin to the top is greater. Since the cylinder block height and connecting rod length remain the same, the piston now rises higher in the cylinder bore. The minimum volume of the combustion chamber is reduced and the compression ratio is increased.





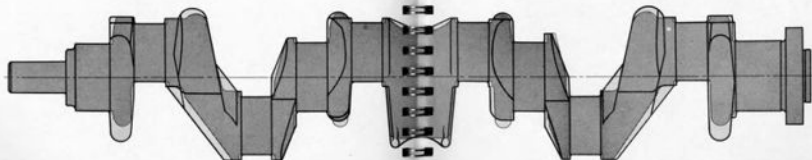
#### CONNECTING RODS . . .

The web in the connecting rod column is heavier for increased stiffness, and the walls at the big end are thicker for greater strength. The big end is narrower and uses precision-replaceable, insert-type bearings instead of integral cast-in babbit.



#### CRANKSHAFT . . .

The new crankshaft has the same overall length but is of stiffer, heavier construction. The same bearing spacings are retained with the thicker crank arms by reducing the width of the journals. Lubrication passages are drilled through the journals and crank arms to provide full pressure lubrication to the connecting rod bearings. The light toned areas indicate where material is added to provide greater stiffness.







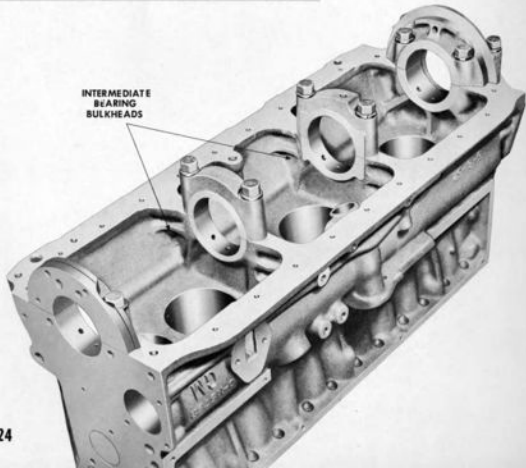
#### **BEARINGS . . .**

The more rigid and stronger connecting rod uses insert bearings. The new bearings are of the precision replaceable type and of steel-backed, thin-wall babbitt design.

#### **CYLINDER BLOCK . . .**

The thicker bottom flange and added reinforcements cast in the walls of the cylinder block for the regular engine also are included in the Blue Flame engine. Crankcase rigidity and main bearing support is further increased by thicker intermediate bearing bulkheads with additional ribbing.

**INTERMEDIATE  
BEARING  
BULKHEADS**





### Power Steering

For 1953, Chevrolet offers power steering of proved design as optional equipment on all models. During recent years, car riding characteristics have been improved by relocating the passenger space farther forward and by using larger section, lower pressure tires. The resulting higher loading on the front tires and the larger tire area in contact with the road have increased steering resistance. Steering gears and linkage have been redesigned to reduce friction and offer a higher mechanical efficiency, and the ratio of steering wheel rotation to the angular deflection of the road wheels has been increased to reduce the effort to steer the car.

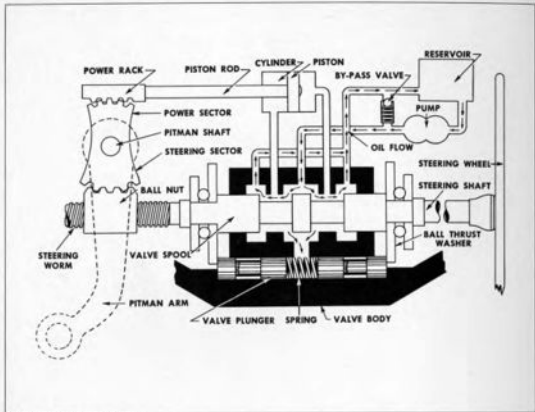
There is a limit beyond which steering wheel diameter and rotation requirements become inconvenient, and power steering offers a practical solution for further reduction in steering effort.

With the new Chevrolet power steering option, steering effort is reduced for parking and ease of car handling in traffic and on long trips. Assistance to mechanical steering does not come into effect until an effort of three pounds is exerted on the rim of the steering wheel, and an effort of no more than eight pounds is required under normal driving conditions. Consequently, the steering is accomplished with small effort on the part of the driver, but

steering feel is retained at all times, and the car is under the complete guidance of the operator. For example, as long as the driver holds the steering wheel on a curve, the car will follow the path in which it is directed and not beyond. If the driver removes his hands from the wheel, the car will tend to return to a straight ahead course. Since steering effort varies with the force necessary to turn the front wheels, and no more than eight pounds effort is used for any normal steering requirement, up to 80 per cent steering assistance is provided by the new Chevrolet power steering option.

The booster system also reduces road shocks, or kickback, from deflecting the wheels and being transmitted to the steering wheel. This feature supplies the sudden increase in steering control needed in the event of a tire blow-out. Consequently, driving comfort is improved and the possibility of losing control of the vehicle is minimized.

In its simplest terms, power steering is the application of auxiliary energy to assist in steering the vehicle. The power steering option offered by Chevrolet consists of a hydraulic booster added to a recirculating-ball type steering gear. The booster system consists of a hydraulic pump, oil reservoir, double-acting cylinder, and a control valve.



## NEUTRAL VALVE POSITION

The hydraulic pump, which has the oil reservoir mounted on its body, is driven from the crankshaft pulley by a narrow wedge belt. The pump, of a constant displacement vane type and capable of producing a pressure of 750 pounds per square inch, mounts on the engine cylinder block and connects to the control valve by means of two high pressure hoses.

A piston, operating in the double-acting cylinder, drives a power rack which meshes with the steering sector gear on the pitman shaft. The hydraulic control valve assembly is concentric with the steering shaft, and piping to the double-acting cylinder completes the hydraulic circuit.

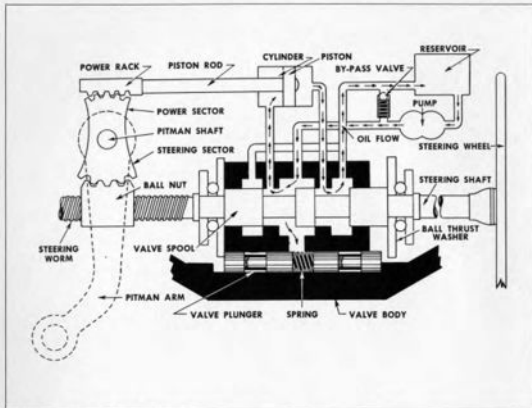
The valve spool is located on the steering shaft in advance of the worm. There are three annular grooves in the bore of the valve housing, and two circular grooves on the valve spool. The valve spool moves in the valve housing with a sliding fit that permits operating freedom, but retains oil under high pressure. The three grooves and two intermediate lands in the valve housing open into oil passages, and the two grooves and separating land

on the valve spool open or restrict the oil flow through these passages.

Arranged circumferentially about the valve housing are five sets of spring loaded plungers which contact the end covers of the valve housing. Thrust washers, operating on ball bearings, are located at each end of the valve spool, and also contact the ends of the plungers.

In neutral position, the valve spool is centered in the valve housing by the plungers, and its central land is so positioned that it allows oil flow through all the housing passages. Under this condition, the pressure of the oil circulation is negligible and has no influence on the piston.

To turn the front wheels, rotation of the steering wheel must move the ball nut on the worm. However, if the pitman arm encounters resistance in operating the steering linkage, ball nut movement on the worm is resisted by the steering sector, and the worm tends to move axially in the ball nut. Such movement is resisted by one or the other of the valve spool thrust washers, depending on the direction of steering wheel rotation. If the force



**VALVE POSITION WHEN TURNING**

of the movement is great enough to compress the plunger springs, the valve spool moves from its neutral position, restricting one of the oil passages to the double-acting cylinder. The oil flow from the pump is resisted and hydraulic pressure is developed. An unbalance in the hydraulic pressure to the cylinder then moves the piston and power rack. The pressure of the power rack on the steering sector rotates the pitman arm shaft and permits movement of the ball nut by the worm. This assistance acts until the axial pressure is sufficiently relieved for the valve spool to return to its neutral position.

The high pressure oil also acts on the inner ends of the plungers, with increasing force proportional to the axial movement of the valve spool. Consequently, the greater the displacement of the valve spool, the greater is the force resisting this movement. By this means, it is possible to design into the gear a definite relationship between the steering demands and the forces exerted at the steering wheel. The gear thus retains steering feel which has been found to be important to the driver for comfort and safety.

If the reaction of the effort required to operate the steering linkage is insufficient to move the valve spool from its neutral position, steering is all mechanical without hydraulic assistance. This is in the range of the normal amount of effort required to keep the vehicle on a straight course.

A pump by-pass valve is included in the device so that simple mechanical steering can be used in the event of pump or belt failure, or for steering when the engine is not operating.

In addition to assisting the driver in steering the car, the whole system also works in reverse. That is, if a shock load, in excess of the forces holding the valve spool in neutral position, is transmitted through the pitman arm, the movement of the valve admits high pressure oil to the proper end of the hydraulic cylinder to resist the shock. Thus, even though normal steering recovery after making a turn is retained, the new Chevrolet power steering gear has great shock absorbing capacity, and little shock reaction is transmitted to the steering wheel. The steering wheel shock caused by a tire blow-out is also reduced, and the hydraulic assistance permits

steering control with low effort for bringing the car to a safe stop.

The recirculating ball type steering gear used with power steering has less friction and provides smoother steering. Although the recirculating ball and regular steering gears have different ratios, changes in the length of the pitman arm and steering arm of the idler bring the overall steering ratios within five per cent.

	Regular	Power Steering
Steering gear ratio	19.4:1	21.3:1
Overall steering ratio	23.1:1	22.1:1

The use of similar steering ratios retains the same steering feel and the driver is not required to change his driving habits. A further advantage is gained in the event of a failure in the hydraulic system or steering when the engine is not operating, since the steering effort will be practically the same as with an all mechanical system.

Various engine and chassis modifications are required for installing the power steering mechanism. The hydraulic pump and reservoir mounting bracket is attached to the engine assembly by the use of longer bolts in existing holes. The regular crankshaft pulley is replaced with a double sheave pulley for driving the hydraulic pump, and the left engine mount frame bracket is reshaped to provide clearance with the pitman arm.

**HEATER AND DEEROSTER.** Two heater and defroster units are again offered as accessory equipment. The recirculating type heater and defroster is retained unchanged from 1952, and a new design replaces the previous air-flow type.

The new heater and defroster unit provides greater operating flexibility and permits better warm weather ventilation. Either outside air from the ventilator duct or the air within the passenger compartment can be fed through the heater. Windows

#### HEATER CONTROLS



Steering gear clearance with the left side sheet metal is provided by replacing the metal air duct with a flexible tube which takes a higher route along the fender skirt. Clearance for the valve of the power steering unit is provided on both conventional and Powerglide cars by relocating the transmission control higher on the steering column and making dimensional changes in the control rod lengths.

**OTHER CHANGES** in optional equipment for 1953 include redesigned white sidewall tires, a lower cut-in speed generator and the continuation of the redesigned fuel and vacuum pump assembly and the special duty generators made available during 1952.

The new white sidewall tires are better protected against curb marring since the white sidewall rubber is no longer extended into the chafing rib. These tires are available in all the sizes and ratings specified for the all-black tires used with various models.

The fuel and vacuum pump was redesigned during 1952 for improved windshield wiper operation. An extra set of valves is incorporated to provide vacuum pumping from both sides of the diaphragm. This double-acting design supplies a more dependable wiper operation under adverse conditions.

Continued are the two optional generators of 45 and 50 ampere capacity which were offered in 1952, and an additional low cut-in speed unit is now available. This new generator begins to charge at very low speed and reaches its maximum capacity of 40 amperes with a low road speed.

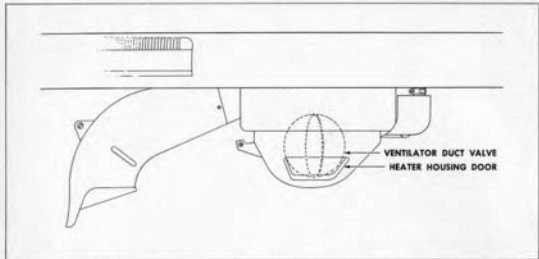
#### Accessories

are normally kept free of steaming when outside air is used during cold weather driving. However, outside air can carry an excessive amount of traffic fumes into the car under certain driving conditions. With the new heater, the contaminated outside air supply can be cut off and the temperature maintained by recirculating the air within the passenger compartment through the heater.

The heater core is installed within the passenger compartment instead of in the right hand ventilator duct from the radiator grille. The new position of the core is high on the dash panel behind the instrument panel where it does not interfere with the front passenger compartment foot room, and the right hand air duct is free from restriction.

The new control panel for the heater and defroster is rectangular in shape and installs on the instrument panel in place of the right hand ventilator knob and plate at the right of the ignition switch. Knobs slide in three horizontal slots in the bright metal escutcheon plate and regulate air flow, defroster operation and temperature. The air flow is regulated by a split knob, with the upper section controlling the blower motor, and the lower section selecting the source of air.

There are three positions for the blower: off, low and high. The air selector has four positions:



### HEATER HOUSING

off, inside air, outside air, and summer ventilation. The lever attached to the air selector knob is connected by cables to the right hand ventilator duct air valve and to the recirculation door in the heater housing. In the off position, both air passages are closed. At the inside air position, the duct valve remains closed and the heater door is opened. When the outside air position is selected, the heater door is closed and the duct valve opened. The choice of these last two positions determines whether inside air or outside air is directed through the heater core before being circulated through the car body. When summer ventilation position is selected, both the heater door and the duct valve are opened so outside air flows directly into the car body, by-passing the heater core.

The defroster in the new heater remains the same in structure and operation as in the 1952 design, and the same temperature control mechanism is retained.

**AUTRONIC EYE.** Automatic headlight beam regulation is offered Chevrolet owners in the Autronic Eye electronic control. This newly developed device has been well received by the purchasers of the more expensive General Motors cars, and a model expressly styled for the 1953 Chevrolet is now available as an accessory.

Highway courtesy, and the Uniform Vehicle Code adopted by most states, require that headlights be so regulated that on-coming drivers are protected from glare. Modern highway speeds also demand headlights that project sufficient illumination to avoid overrunning the visible field. For many years, cars have been equipped with headlights which provided both an upper and lower beam to satisfy these separate requirements and a foot switch, for con-

trolling the beam in use, was introduced as a convenience feature. The Autronic Eye has now been developed to provide an automatic beam regulation, assuring compliance with legal requirements and the observance of good driving etiquette for improved highway safety.

The Autronic Eye mechanism receives battery current as soon as the headlights are turned on. However, automatic control does not begin until the regular upper beam circuit is closed. In other words, the two positions of the headlight foot switch, or dimmer switch, now operate either the lower beam only, or the circuit for automatic beam regulation. Consequently, after the headlights have been turned on for a few seconds, no additional warm-up time is required for Autronic Eye operation when the automatic position is selected.

An auxiliary foot switch also is provided so that the Autronic Eye control can be overridden for upper beam signalling when desired.

Four individual units are included in the Autronic Eye accessory kit. These consist of a phototube unit, which mounts on the top of the instrument panel at the left hand side, an amplifier and wiring harness unit, to be installed in the engine compartment, a power relay for operating the headlight circuit, and an auxiliary foot switch, for mounting on the toe pan slightly above the regular headlight foot switch.

The phototube unit contains a lens, filter, mask, phototube and sensitivity control. It is positioned on the instrument panel so that the light from approaching headlights are focussed on the phototube. Energizing voltage and signal return is supplied by the wiring harness from the amplifier. The phototube response can be adjusted for sensitivity and tinted windshields.

When light of a predetermined intensity strikes the phototube during automatic operation, a signal is produced and returned to the amplifier where it is increased to actuate a sensitive relay. This internal relay closes a circuit for operating the power relay which switches the headlights from the upper to the lower beam. If the operator of an approaching vehicle is using his high beam, he would normally switch his lights to the lower beam, greatly reducing the amount of light falling on the phototube unit. The Autronic Eye has been designed to maintain the vehicle headlights on the low beam even with this reduction in light, and does not restore the upper beam operation until light is removed from the phototube unit.

If the lights of the approaching vehicle are not lowered to the passing beam, the auxiliary foot switch can be used for signalling by operating the upper beam as long as the switch is depressed.

The possibility of projecting glare into a vehicle being followed can be avoided by holding the headlights on the low beam by means of the regular foot switch.

**DIRECTION SIGNAL.** Traffic laws almost universally require the driver to signal a turn, and each year additional States demand that all new cars be equipped with a device for this purpose. Because the direction signal also has proved to be a major safety feature, it is available as a factory-installed accessory for all 1953 passenger car models.

The circular housing enclosing the signal operating switch is located on the steering column and is covered by the hub of the steering wheel. The same color paint is used on the switch housing and the mast jacket, providing a customized appearance to the installation.

A switch of concentric design fits in the housing and is operated by a handle with a bright metal shaft having a black plastic knob. The switch knob is positioned for convenient operation by the fingers of the left hand without removing the hand from the

steering wheel rim. When the turn is completed, the switch returns to its neutral position as the steering wheel rotates back for a straight ahead front wheel position.

According to the direction of the turn being signalled, the arrow at the right or left hand side of the instrument cluster trim plate blinks with a green glow. The sound of the repeating clicks made by the blinker mechanism also informs the driver when the signal is operating.

**NEW ACCESSORIES.** In addition to the Autronic Eye and redesigned heater and defroster assembly, a full line of accessories is again provided and several new accessories are made available.

The new accessories are: a courtesy lamp for the front compartment, a remote controlled rear view mirror, and an anti-icing windshield wiper blade assembly.

The courtesy lamp installs under the instrument panel at the right hand side. It connects to the dome lamp switch circuit and automatically supplies additional illumination for the front passenger compartment whenever the dome lamp operates.

The new rear view mirror is fully adjustable from inside the car. The mirror installs near the forward edge of the left front door just below the ventipane. Its control handle extends through the door and permits the driver to rotate and tilt the mirror. This flexibility in selecting the rear view field of vision is convenient for varying traffic conditions, and permits an easy adjustment to suit different drivers and front seat positions.

The anti-icing windshield wiper blade assembly has a flexible hood covering all but the rubber wiping edge. This cover prevents ice or snow from collecting between the rubber wiping member and its metal support and thereby maintains the blade flexibility necessary for following the curvature of the windshield. In addition, the flexing of the hood, as it moves across the windshield, flakes off ice that may have formed on its outside.

#### **DIRECTION SIGNAL SWITCH**



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