

1954 CORVETTE

Production: 3,640 roadsters

1954 NUMBERS

Vehicle: E54S001001 through E54S004640

Suffix: YG: 235ci, 150hp, 155hp

Block: 3835911: 235ci, 150hp, 155hp

Head: 3836241: 235ci, 150hp, 155hp

Carburetor: Carter 2066SA #3706989: 235ci, 150hp, 155hp

Distributor: 1112314: 235ci, 150hp, 155hp

Starter: 1107109: 235ci, 150hp, 155hp (early two-coil design)
1108035: 235ci, 150hp, 155hp (later four-coil design)

Ending Vehicle: Dec 53: 001014

Abbreviations: ci=cubic inch, hp=horsepower

1954 FACTS

- Chevrolet started production of 1954 Corvettes in a renovated St. Louis assembly plant in December 1953. The plant was designed to build 10,000 Corvettes annually. Demand was misjudged, as it would be six years (1960) before Corvette exceeded 10,000 in annual sales.
- The Blue Flame Six engines used in all 1954 Corvettes had a power rating of either 150hp or 155hp. The extra horsepower resulted from a camshaft design change made during 1954 production. Externally, the engines looked the same, but the more powerful version can be detected by inspecting the camshaft. Later camshafts had three dots between the fifth and sixth inlet cam lobes.
- Early production 1954 models had two interior hood releases. Later models had a single interior release to activate both hood latches.
- The window storage bag for the 1954 was color-keyed to the car's interior. The design was more square than the 1953. The 1954 type also had a strap to permit anchoring to the forward vertical trunk partition panel.
- The 1954 valve cover was similar to the redesigned 1954 Chevrolet passenger car's cover. Both were attached to the head by stovebolts around the perimeter. The 1954 Corvette's valve cover was either chrome plated or painted engine enamel blue. "Blue Flame" and "150" decals, reading from the passenger side, were affixed to the painted covers.
- Early 1954s had the "bullet" air inlets common to the 1953 model. But 1954s later than #002906 had a dual "pot" apparatus, intended in part to reduce the possibility of engine fires.
- All 1954 Corvettes had six-volt electrical systems.
- Early 1954 Corvettes had short exhaust extensions. Models later than #002523 had longer extensions with built-in baffles. Both styles were originally stainless steel.
- Ignition shielding consisted of upper and lower stamped metal shields, either painted or chromed. Most 1954 Corvettes appear now with both shields painted or both shields chromed, but the factory did not necessarily match the shields on individual cars.
- The 1954 starters had four field coils, except for very early models which had a two-coil style.
- The road draft tube in 1954 models had an "X" stamped in the top surface for rigidity. Most 1953 tubes were smooth.
- The 1954's radiator surge tank, except for very early, had two stamped radial rigidity bands formed in the tank. All were chrome plated.
- The 1954's brake and fuel lines were routed inboard of the frame members, except for very early models.
- The 1954 carburetor linkage was a fabricated, three-piece link.

1954 OPTIONS

| CODE | DESCRIPTION | QTY | RETAIL \$ |
|------|---|-------|------------|
| 2934 | Base Corvette Convertible | 3,640 | \$2,774.00 |
| 100 | Directional Signal | 3,640 | 16.75 |
| 101 | Heater | 3,640 | 91.40 |
| 102 | AM Radio, signal seeking | 3,640 | 145.15 |
| 290B | Whitewall Tires, 6.70x15 | 3,640 | 26.90 |
| 313M | Powerglide Automatic Transmission | 3,640 | 178.35 |
| 420A | Parking Brake Alarm | 3,640 | 5.65 |
| 421A | Courtesy Lights | 3,640 | 4.05 |
| 422A | Windshield Washer | 3,640 | 11.85 |

- A 235ci, 150hp (or 155hp) engine, vinyl interior trim, and soft top were included in the base price.
- Prices included federal excise taxes. Local taxes and dealer charges were not included. Prices were effective October 28, 1954. Initial 1954 pricing was the same as 1953. Prices were suggested by Chevrolet and original customer sales records indicate that the actual prices charged by dealers varied both high and low.
- By listing the Powerglide automatic transmission as an option, the option list implies that a manual transmission was standard equipment. Not true. All 1954 Corvettes had the "optional" Powerglide automatic transmission; in fact, it is nearly certain that all 1954s were built with all options.
- The 1954 signal-seeking AM radio was the same as 1953's, except all but early 1954 radios had 640-kilocycle and 1240-kilocycle Conelrad national defense emergency markings.
- Auxiliary hardtops were not available for 1954 models as factory options or as Chevrolet-sponsored dealer accessories. However, aftermarket companies manufactured removable hardtops for 1954 (and 1953, 1955) Corvettes and some Chevrolet dealers sold them.
- The 1954 heater was not a fresh air type; that is, it recirculated interior cockpit air only.
- All 1954s were built with windshield washer systems. They were vacuum-operated, activated by a button on the windshield wiper switch.
- Tires were changed during 1954 production from tube-type to tubeless. Because different manufacturers supplied tires, it is probable that both types were used simultaneously for some time period.

1954 COLORS

| EXTERIOR | QTY(est) | SOFT TOP | WHEELS | INTERIOR |
|---------------------|----------|----------|--------|----------|
| Polo White | 3,230 | Beige | Red | Red |
| Pennant Blue | 300 | Beige | Red | Beige |
| Sportsman Red | 100 | Beige | Red | Red |
| Black | 4 | Beige | Red | Red |

- Exterior color quantities are not from Chevrolet records. These are estimates based on surveys, theories, and other data. They should not be relied upon as precise quantities.
- Suggested interiors shown. Other combinations were possible.
- Interiors and exteriors were not coded to individual cars. The Polo White, Pennant Blue, Sportsman Red, and Black exteriors are those known to have been used during 1954 production.
- Based on original owner reports, there is a reasonable probability that some 1954 Corvettes were painted exterior colors other than Polo White, Pennant Blue, Sportsman Red or Black. Possibilities include, but are not limited to, Metallic Green and Metallic Bronze. Paint vendor documentation confirms the intent to offer additional colors, but production records have not surfaced to positively confirm actual build.
- All 1954 Corvette soft tops were specified to be beige canvas with top bows painted to match, and it is believed all were. However, the owner of a very late 1954 (eight units from the end of production) has reported that based on old home movies, his car appeared to have a white top when purchased new in 1954.

The Corvette Black Book

1953-1993

October 1992

Published by

Michael Bruce Associates, Inc.
 Michael Antonick, President
 Post Office Box 396
 Powell, Ohio 43065



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Michael Bruce Associates, Inc. acknowledges with appreciation the following enthusiasts who contributed their expertise to this and previous editions of the *Corvette Black Book*: Noland Adams, Dan Aldridge, John Angwert, Pat Baker, Jane Bartheleme, Michele Boling, Kent Brooks, Barry Brown, David Burroughs, Steve Dangremond, Dr. M. F. Dobbins, Bob Eckles, the late Sam Foltz, John Hibber, Mike Hunt, Alan Kaplan, Paul Kitchen, Gary Kitcher, Ralph Kramer and staff, Jim Krughoff, Gary Lusk, Bill Locke, Bob Lolewski, Bob McDorman, Chip Miller, Bill Mock, Brian Pearce, John Poloney, Bill Rhodes, Jeffrey Smith, Mark & Dixie Smith, Lou Vitale, Jerry Wadsworth, Jerry Weichers and Don Williams. Thanks also to Callaway Engineering, to Mercury-Marine, and to the Chevrolet Motor Division of General Motors Corporation.

Notice: The *Corvette Black Book* and its publisher, Michael Bruce Associates, Inc. have no relationship or connection whatever with Hearst Business Media Corporation, its parent or affiliated corporations, or the *Black Book* published by National Auto Research Division of Hearst Business Media Corporation.

Michael Bruce Associates, Inc. and the *Corvette Black Book* are not associated with or sponsored by General Motors or its Chevrolet Motor Division. **Cover:** Photo and design by Mike Antonick, 1963 Corvette owned by Bill Munzer; restored by Bill Munzer and Don Williams. Printed and bound in the United States of America.

ISBN: 0-933534-35-3

BOOK TRADE DISTRIBUTION BY:
Motorbooks International
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CORVETTE - Supplement

SERIAL NUMBERS

VEHICLE SERIAL NUMBER

Same as standard production except series designation is "E" and assembly plant is "S" for St. Louis.

Thus E 54S 001001 is the first unit.

TRANSMISSION SERIAL NUMBER

Same as Powerglide transmission as shown on page 9

ENGINE SERIAL NUMBER

Type designation is "YG"

REAR AXLE SERIAL NUMBER

Type designation is "W" and unit is built at Detroit Gear and Axle Plant.

DIMENSIONS

| | |
|-------------------|-----|
| Wheelbase----- | 102 |
| Tread, Front----- | 57 |
| Rear----- | 59 |

VEHICLE WEIGHTS

| | |
|---|-------|
| Shipping----- | 2705 |
| Curb----- | 2850 |
| Loaded----- | 3150 |
| Heater (Not included in above weights)----- | 20.50 |
| Radio (Not included in above weights)----- | 18.36 |

FRAME

| | |
|---|---------------------|
| Make----- | Own |
| Type----- | Box girder |
| Maximum overall length----- | 139.28 |
| Maximum overall width (over side members)----- | 43.24 |
| Material----- | Hot Rolled Steel |
| Material yield point----- | 33000 lb/sq. in. |
| Material elongation----- | 25% min in 2 inches |
| Side member section modulus (in ³)----- | 1.677 |
| Moment of inertia (in ⁴)----- | 4.930 |

Construction:

Side members----- Box Section, each composed of two full length channel sections welded together.

Front Suspension Cross Member----- Formed, flanged, semi-tubular section with flat steel bottom plate welded to flanges across diametrical width of section.

Shock Absorber Upper Mounting Cross Member----- Inverted Channel Section

Rear Cross Member----- Box Section
Composed of a flanged channel section and a welded-in bottom plate.

Center "X" Member----- Composed of I-beam sections attached to side members at the end of each leg of the "X". Also attached to forward section of side members by long angular braces from the front legs of the "X".

EXTERIOR-INTERIOR COLORS & EQUIPMENT

Exterior Color:

| | |
|---------------|--------------|
| Standard----- | Polo White |
| Optional----- | Pennant Blue |
| Top----- | Beige |
| Wheels----- | Red |

4-12-54

CHEVROLET 1954 SPECIFICATIONS - PASSENGER

Interior Finish:

| | |
|--|--------------|
| Upper Instrument Panel, Steering Column, Steering Wheel Hub and Spoke and Directional Signal Housing | |
| Standard----- | Red |
| Optional----- | Pennant Blue |
| Lower Instrument Panel and Door Trim Moulding | |
| Standard----- | White |
| Optional----- | Pennant Blue |
| Steering Wheel Rim | |
| Standard----- | White |
| Optional----- | White |

Interior Trim:

Seats and Door Panels and Cowl Kick Panels

| | |
|---------------|----------------------------|
| Standard----- | Red with White stitching |
| Optional----- | Beige with White stitching |

Floor Covering

| | |
|---------------|-------|
| Standard----- | Red |
| Optional----- | Beige |

EQUIPMENT

Arm Rest----- Both Doors

Stowage Compartment----- Both Doors

Top----- Folding, manually operated and stowed in top well at rear of driver and passenger seats.

Door Windows----- In chrome frames including ventipanes. Window frame snaps into slots in top of doors. When not in use the side windows are stored in the luggage compartment.

Luggage Compartment----- Rear Deck; Operated by key with counterbalanced lid. Spare tire stowed below floor.

Hood----- Hinged at front with release inside of cockpit. Supported in open position by manually operated support arm.

Headlights----- Recessed into front fenders behind mesh grille.

FRONT SPRINGS

| | |
|-------------------------------|-----------------------------------|
| Make and Type----- | Own, coil |
| Material and Gauge----- | Chrome Alloy Steel; .547-.550 |
| Number of Coils----- | Total, 9.75; Active, 7.94 |
| Diameters----- | Outside 4.30; Pitch 3.752 |
| Height----- | Free 13.45; Working 9.62 @ 1145lb |
| Height under Curb Weight----- | 9.72 |
| Capacity at Ground----- | 800 lb |
| Deflection Rate: | |
| At Spring----- | 300 lb/in. |
| At Wheel----- | 110 lb/in. |

REAR SPRINGS

| | |
|---|------------------------------------|
| Make and Type----- | Own, Semi-elliptic |
| Material----- | Chrome Carbon Steel |
| Length and Width----- | 51 x 2 |
| Spring Clips----- | 4; 3 clinch type; 1 bolt type |
| Spring Covers----- | None |
| Number of Leaves----- | 4, embossed for full length liners |
| Thickness of Leaves----- | 1, 3 & 4, .282; 2, .313 |
| Average Design Load at Camber Height----- | 545-605 lb |
| Camber Height at Design Load----- | 1.58 neg |
| Average Rate of Deflection----- | 115 lb/in. |
| Spring Liners----- | 3, Wax impregnated fibre board |

REAR AXLE

Same as Powerglide except Hotchkiss Drive.

CORVETTE - SUPPLEMENT

ENGINE

The Corvette engine is basically the same as the Blue Flame-125 passenger car engine, with the following exceptions and characteristics.

- Tappets ----- Mechanical
- Timing Gear ----- Aluminum
- Carburetor ----- 3 Side draft Carburetors with manifolds and air ducts to suit design.
- Compression Ratio ----- 8.0:1

ADVERTISED MAXIMUM ENGINE PERFORMANCE

- Gross Horsepower -----150 @ 4200 RPM
- Net Horsepower -----140 @ 4200 RPM
- Gross Torque -----223 ft lb @ 2400 RPM
- Net Torque -----216 ft lb @ 2400 RPM

ADVERTISED CAR PERFORMANCE

- Based on curb weight plus 300 lbs for 2 passengers
- Performance weight -----3150
- Pounds/gross horsepower -----21
- Pounds/cu. in. displacement -----13.38
- Gross horsepower/cu. in. displacement -----.64
- Power displacement (cu. ft/mile) -----180.9
- Displacement factor (cu ft/ton mile) -----114.86

CARBURETOR

- Number Used -----Three
- Make and Type -----Carter, side draft
- Main venturi size,throat ID -----1.312
- Choke -----Manual

AIR INLET

- Number Used -----Three (one for each carburetor)
- Type -----Chrome plated metal housing with screen covered openings.

ELECTRICAL EQUIPMENT

- Generator -----Delco-Remy 1102793
- Voltage and Current Regulator -----Delco-Remy 1118827
- Distributor -----1112314
- Coil -----1115394
- Spark Plugs -----AC 44-5 or 43-5 Commercial
- Shielding-Spark plugs, wires, distributor and coil are completely enclosed by a metal shield.

TRANSMISSION

Same as Powerglide except that the selector lever is mounted in floor at right side of driver.

DRIVE LINE

Hotchkiss drive with one propeller shaft with a U-Joint at both ends.

FUEL SYSTEM

- Fuel Tank -----Two stamped pans, seam welded
- Capacity -----17.25 gals
- Mounting -----Supported by two straps attached to under body behind seat.
- Filler -----In body left side to rear of driver's entrance door.

EXHAUST SYSTEM

- Type -----Dual
- Muffler -----Two
- Type -----Diffusion and resonance, reverse flow
- Size -----16 x 5-1/16 x 7-5/16 Oval
- Manifold -----Split with each exhaust pipe serving three cylinders.
- Exhaust pipes -----2
- Tail pipes -----2
- Both exhaust and tail pipes are welded or seamless steel tubing whose diameters are 1.75 OD and 1.65 ID.

COOLING SYSTEM

- Capacity -----17-3/4 qts
- Radiator, Make and Type -----Harrison, Cellular
- Material -----Copper
- Size -----.20 x .560 x 2
- Frontal Area -----393.48 sq. in.
- Pressure Cap -----4 pound, located in aux tank
- Auxiliary water supply tank -----
- Located in engine compartment on right side at cylinder height.

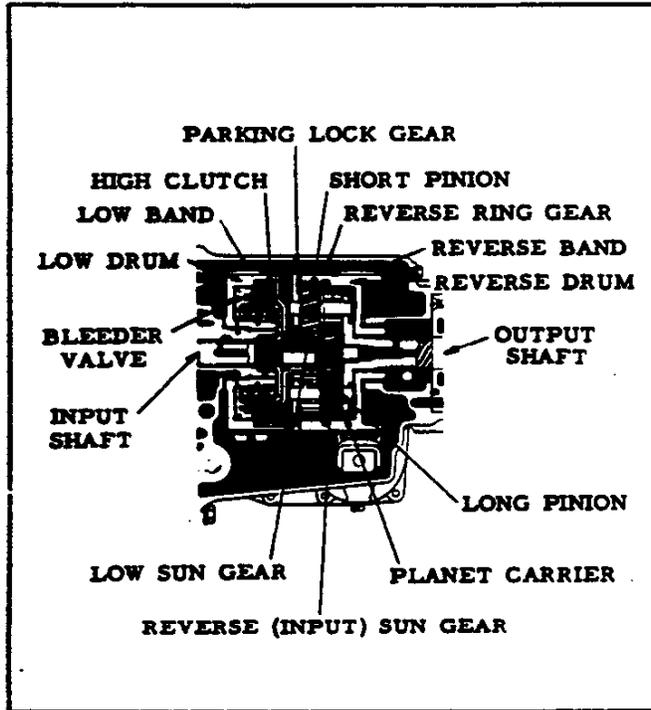
RADIATOR HOSES

| Function | Inlet | Outlet | Supply Tank |
|--------------------|--------------------------|------------------------|----------------------|
| Material | Fabric reinforced rubber | | |
| Location | Cyl head to Radiator | Radiator to water pump | Aux tank to Radiator |
| Quantity | 1 | 2 | 1 |
| Shape | Compound Curve | Elbow | Straight |
| I. D. | 1-1/4 | 1-1/2 | 1-1/2 |
| Length (Developed) | 12-1/2 | 6-3/4 Each | 10-1/2 |
| | Approx | | Approx |

STEERING

- Steering Gear Ratio -----16:1
- Steering Wheel Diameter -----17-1/4
- Turning Diameters:
- Right-Wall to Wall -----38.58
- Left-Wall to Wall -----38.99
- Right-Curb to Curb -----36.55
- Left-Curb to Curb -----36.93
- Toe In -----0-1/8

AUTOMATIC TRANSMISSION OPTION—Supplement



HIGH CLUTCH

Type ----- Multiple-disc
 Discs:
 Driving, number and type -----
 Four, steel with cork and paper facings, bonded
 Driven, number and type ----- Five, steel
 Drum:
 Material ----- Cast iron
 O D ----- 5.867-5.872
 Pressure relief valve:
 Location ----- In front face of clutch piston
 Type ----- 3/16 ball
 Hub:
 Material ----- Stamped steel
 Splines ----- Internal, 19 teeth
 Flange:
 Material ----- Stamped steel
 Splines ----- Internal, 23 teeth
 Spring:
 Type and I D ----- Coil, 2.750-2.800
 Length and pressure ----- Approximately
 3-49/64 (free), 1-23/64 at 181 lb, 1-7/32 at 191 lb
 Piston type and material -----
 ----- Annular, aluminum alloy die casting
 Size ----- 4.748-4.752 O D, 2.498-2.500 I D

Low brake band:

Material ----- High tensile spring steel
 Lining ----- Molded metallic, bonded and grooved

HYDRAULIC CONTROLS

Oil intake screen: Type ----- Double screen; outer - 60 x 40 mesh, inner ----- 8 mesh
 Location ----- Transmission housing oil sump.
 Oil pumps: Type ----- Internal external gear
 Location:
 Front ----- In rear of transmission housing
 Rear ----- In rear of transmission case
 Number of teeth:
 Front ----- 31 internal, 25 external
 Rear ----- 25 internal, 20 external
 Transmission rear bearing:
 Make ----- New Departure
 Type ----- 3205, single row ball
 Main valve body:
 Material ----- Cast iron
 Location ----- Bolted to rear of transmission housing
 Manual valve:
 Material ----- Hardened steel
 Type ----- Spool
 Operated by ----- Selector lever through linkage
 Check valve:
 Material ----- Flat spring steel
 Type ----- Two passage check, hairpin shaped
 Pressure regulator valve:
 Type ----- Spool
 Pressure range:
 Automatic cruising ----- 50 to 165 PSI
 Automatic low ----- 50 to 165 PSI
 Manual low ----- 165 to 200 PSI
 Reverse ----- 165 to 200 PSI
 Neutral ----- 50 to 165 PSI
 Park ----- 0 PSI
 Modulator:
 Location ----- Servo cover, right side
 Type ----- Vacuum and hydraulic
 Low band servo:
 Type ----- Piston, one release spring
 Adjustment ----- Threaded anchor bolt
 Reverse band servo:
 Type ----- Piston
 with release spring and inner cushioning spring
 Adjustment ----- Threaded anchor bolt
 Thermostatic by-pass valve:
 Location ----- Servo cover
 By-pass closes ----- 210°-240° F

CORVETTE - Supplement

Tentative to the incorporation of Corvette specifications into the regular passenger car section of this book, we have in the following pages endeavored to list the pertinent data peculiar to the Corvette model.

