1953 Supercharged Corvette... An Early Example of the "Muscle Car"

— Owner Dave Ferguson

Let's take a few minutes to recognize a significant effort to produce and demonstrate the first Corvette "muscle car."

The production of the new Corvette in 1953 caused great excitement at McCulloch Motors in California. The newly-developed Supercharger had provided a significant performance in after-market installations, so why not make it a production option?

A brilliant young engineer at McCulloch named Art Oehrli launched the campaign to: 1. Acquire one of these new sports cars. 2. Create and test a supercharged 1953 Corvette. 3. Produce supercharger kits to be installed on the Corvette production line.

Art Oehrli and his brother John had been the brains and muscle behind the invention and performance of the McCulloch superchargers. however, the acquisition of one of these new Corvettes proved difficult. Even though General Motors showed interest in Oerhli's idea, there were no cars available for this venture. However, G.M. did inform Oerhli that a 1953 Corvette would be delivered to the Los Angeles area.

Corvette number 024 (VIN #E53F001024) was bound for Los Angeles, California, to the President of Standard Oil in September of 1953. Art Oehrli contacted this executive and he agreed to loan him this new prize. The adventure was on.

The next few months were spent in the design and implementation of the supercharger modification into the compact engine compartment of the 1953 Corvette.

The results were impressive. The modified six-cylinder/ powerglide drive-train showed significant improvement:

1. The acceleration time from 0-60 was reduced 25% (from 12 to 9.0 seconds).

2. Rear wheel horse power was increased 35% (from 87 to 117).

A complete description of the modification and performance improvements are contained in the attached booklet (dated 7 April 1954). This booklet was part of the proposal McCulloch made to General Motors. As noted in the booklet, this test data was verified by Maurice Olley, Chief Engineer for G.M.

Even with these significant improvements, G.M. decided to abandon the "ole" six-banger and proceed with the development of the V-8 for future Corvettes.

This supercharged Corvette was returned to its owner and after he enjoyed tearing up the streets and drag strips of LA with it for awhile, he must have found a new toy, because he gave the Corvette back to Oehrli.

The car sat idle for a few years, then Art gave it to his "Chief mechanic," his pride and joy, his daughter Sandy.

After disconnecting the blower and other slight de-modifications, he gave #024 to his daughter for her 16th birthday.

For the next few years, Sandy was the envy of every teenager in L.A. She cruised the '53 Vette all over. When she got out of college, she decided on a change of vehicle and sold the car in the mid '60's.

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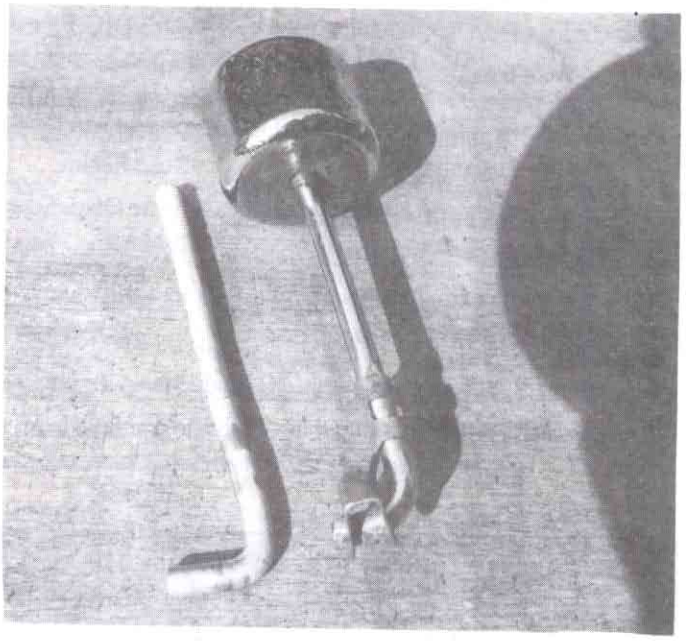
Another Change to be Expected in Early-Model Corvettes



The button and rod for the soft top lid assembly differed from 1953 - 1957 and 1958 - 1962.

Pictured above: The 1953 - 1957 was solid and the rod was brazed into the button, whereas, in 1958 - 1962, the rod was threaded and screwed into the button. It also had a retainer nut to secure it, which isn't in the picture.

They may have done this for various reasons... maybe to enable the button to be adjusted in or out, or to make it easier and cheaper to replace a bent rod.

Whichever, it's just another one of those little differences often encountered when working with these early Corvettes.

— Roy Braatz, Jr.

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1953 Supercharged Corvette ...

The car was involved in a minor traffic accident in 1967, and for the next 21 years it moved only by trailer. Fortunately, most of this time it was stored in the Southwestern Desert (New Mexico and California). The car changed hands a few times during those years and I first saw it in 1979. It showed the ravages of time but it was in prime restorable condition. The owner, Jim Mangione, showed no interest in selling it. He had owned the car since 1972 and had planned to restore it himself. I'm not sure why he decided to sell it to me. I think he got tired of me bugging him.

When he decided to sell it, his price was rather high and non-negotiable (take it or leave it). Since I had two daughters in college at the time, I thought that maybe a partner in the venture would be advisable. I contacted Mel Winer (a known Corvette addict) and we agreed on a joint restoration venture. This venture started in May of 1988.

The car had remained intact over the years. The complete original drive train was successfully rebuilt by Bill Neville of Anaheim and most of the supercharger ducts were still in place. The few metal parts that were missing were fabricated by my good friend and "metal magician" Henry DePue.

Since this car had a unique history, it was decided to restore it to its modified condition, i.e. its configuration as modified and tested by Art Oehrli!

The hand laid fiberglass body was pieced back together and straightened by yours truly. The entire outer surface had to be recovered with fiberglass and recontoured. This marvelous achievement and final painting was accomplished by Reverend Dan Dempsey of Burbank, California.

Re-assembly started on 15 May 1989. All our evenings and weekends were spend completing the task. We had set our goal to have the car completed for the 1989 NCRS National Event at Bend, Oregon in August, 1989.

The car debuted at this event (and in my unbiased opinion) it was the hit of the event.

As always, restorations never seem to be totally completed. Work is continuing on the supercharging equipment. My next goal is to restore its performance to match the test data in the attached report.

Great attention was given to the restoration of each individual part. Each original part was restored whenever possible. All parts are original or NOS. There is one part that I have not been able to locate. The original "Super Charged" script was missing. If anyone out there has any of McCulloch's script, please let me know.

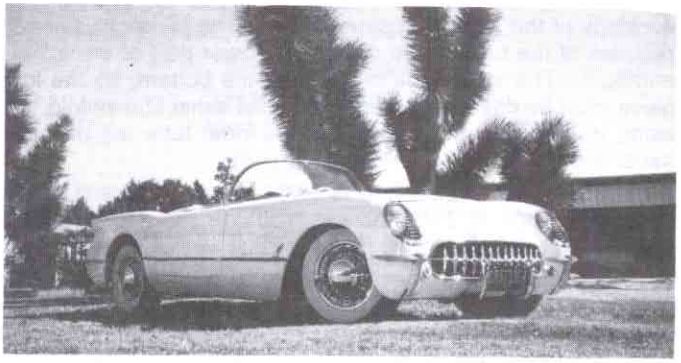
Sandy Oehrli (Arico) and her husband Marc have been extremely helpful to me in the collection of technical data and the history of 1953 Corvette #024.

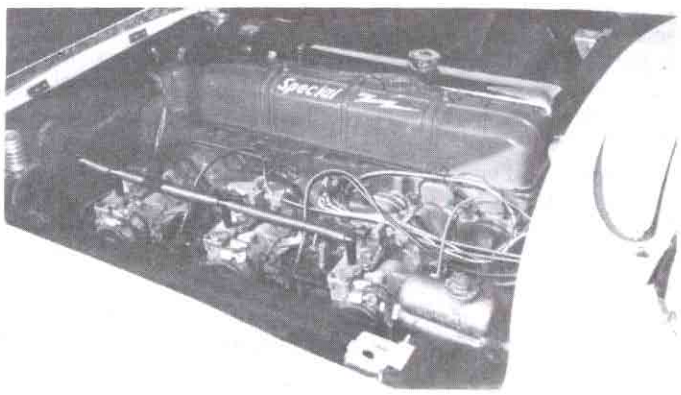
LIST OF OWNERS:

Car was built in late August of 1953.
1953 - 1954 President of Standard Oil, Los Angeles, CA.
1954 - 1965 Art & Sandy Oehrli, Westchester, CA.
1965 - 1968 James N. Howell, Venice, CA.
1968 - 1972 James Quaintance, Venice, CA.
1972 - 1988 Jim Mangione, Quartz Hill, CA.

LIST OF DATES & NUMBERS:

Part:	Number:	Date:
Body	E53F001024	D293
Engine	LAY 380 882	F43
Head	3836066	
Carb tags	E 3	
Transmission	E 203 Body E 213 Tail	
Adapter plate	G 63	
Trans stamping	Z E 27 D	
Rear end	L W 623	
Heater Core	E 53	
Tachometer (Revolutions 136737)		July 31, 1953
Speedometer (25758.0 Miles)		July 16, 1953





TOP: 1953 Corvette #024 today.
BOTTOM: The six-cylinder engine which GM originally installed in the Corvette.

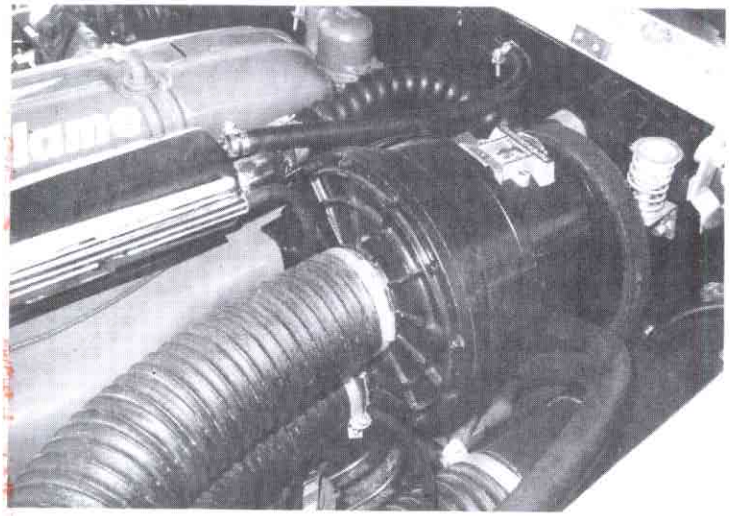
SUPERCHARGER INSTALLATION

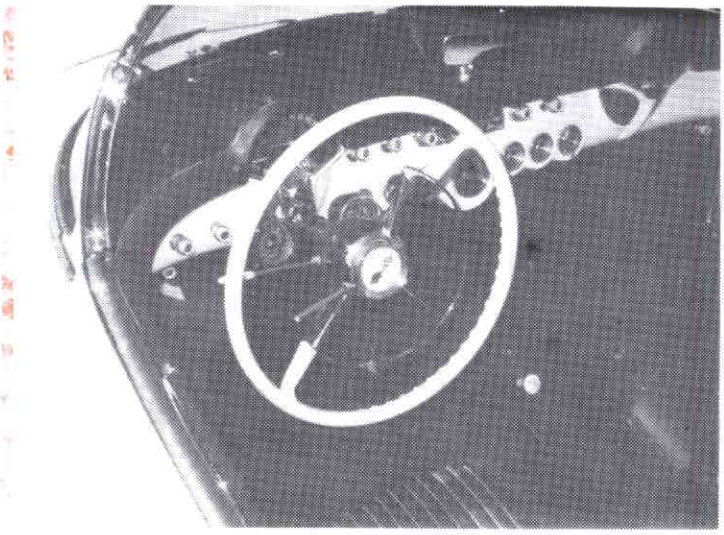
The McCulloch Motors Corporation has installed a VS-57 Supercharger in a Chevrolet Corvette for the purpose of comparing the relative performance of the car with and without a Supercharger.

The following modifications were prepared in making the experimental Supercharger installation.

Due to the compactness of the engine compartment, location of the blower was necessarily limited to the right side. This necessitated routing the discharge duct forward through the right front air baffle and across to the left baffle where it was brought through at a point opposite, and in line with, the special metal duct constructed to accommodate the three carburetors.

The Supercharger inlet duct was routed through the sheet metal of the right wheel well and connected to a large oil bath air cleaner located at the rear of the wheel well. Protective baffling was installed to shield the air cleaner from road dust.





TOP: A front view of 1953 Corvette #024.
CENTER: The Supercharger Unit designed by Art Oehrli.
BOTTOM: #024... Behind-the-wheel after restoration.

CARBURETION

The carburetors remained basically standard. The only modification being the addition of pressure fittings in the top of the float bowl covers for the purpose of equalizing the float bowl pressure with Supercharger pressure. This pressure was tapped from the forward portion of the special carburetor inlet duct.

FUEL PUMP

The standard A.C. fuel pump was found to be inadequate. An A.C. 9294 (5591621) '52 Oldsmobile fuel pump was modified to fit, and the vacuum boost pump diaphragm spring was removed to reduce the cam load. A pressure fitting was located in the pump casting such that blower discharge pressure could be applied to the back side of the fuel pump diaphragm, for the purpose of raising the fuel pressure. In addition, a Bendix electric fuel pump was installed and located adjacent to the fuel tanks. This pump was connected electrically to a manifold pressure switch such that it functions only under conditions of high engine load.

DISTRIBUTOR

The maximum spark advance was reduced from 28 to 22 degrees by modifying the automatic advance stop. The distributor was otherwise standard. Spring tension decreased.

COMPRESSION RATIO

Several test runs were made with the standard compression ration of 8:1 at Supercharger discharge pressures ranging from 4.0 to 5.0 psi. The fuel octane requirement of this combination was in excess of 95. The head gasket was replaced with an Export gasket, reducing the ratio to 7:1. Under these conditions, satisfactory performance was attained using Union 7600 in conjunction with the aforementioned spark advance limitation.

SPARK PLUGS

A.C. 43-5 Com. plugs, which are approximately two heat ranges cooler than the standard A.C. 44-5, were found more satisfactory.

OTHER MODIFICATIONS

The radiator tank was moved two inches rearward to provide clearance for the Supercharger.

A new fan hub was fabricated to provide sufficient clearance for the Supercharger drive belt. The relative position of the fan was not changed.

The vibration dampener was modified and used as a 7.5 O.D. Supercharger drive pulley. A special Dayton belt, with an outside circumference of 56.5 inches, was used to drive the Supercharger.

PERFORMANCE DATA

Two significant points are to be found in the following performance curves:

1. The acceleration time from 0-60 miles was reduced 25% or from 12 to 9 seconds.

2. The rear wheel horse power was increased 35% or from 87 to 117.

—McCulloch Motors Corporation