



the fifth wheel

NOVEMBER 2012

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ESTABLISHED 1976

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HEAT EXCHANGERS!

The air-cooled Volkswagen Beetle had a little problem: a "stale air" cabin heater.

"Stale air" is the term that Volkswagen enthusiasts use when they refer to the heating systems used on 25, 36 and early 40 hp Beetles. It was a design in which the same air that was blown across engine heads and cylinders was also blown into the interior of the car for heat.

In these systems, a large square flap in each side of the lower heating channel is closed off when the cable is pulled, preventing the warm air from escaping out of the back of the engine, and instead forcing it toward the interior of the car through the heater box.

Stale air heaters are reputed to work well as long as the engine is in good shape and clean. But a dirty and oily engine makes for smelly air in the interior when the heater is turned on. And if there are any head gasket leaks or exhaust packing leaks, the smelly air becomes contaminated with deadly carbon monoxide.

In 1963, Volkswagen replaced the "stale air" design with a new "fresh air" heating system. This system ports air out of the engine blower housing, before it has a chance to pass over the dirty engine, and ducts it into heater boxes equipped with heat exchangers. There, the air is heated and then routed into the interior of the car through channels welded to the floor pan of the car. None of the air for the heater circulates

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The Fifth Wheel is published monthly by the Lehigh Valley Corvair Club (LVCC), Inc. We accept articles of interest to Corvair owners for publication. Classified advertising of interest to Corvair owners is available free of charge to all persons. Commercial advertising is also available on a fee basis. Please contact our newsletter editor, Allan Lacki for details.

LVCC is one of the many regional chapters of the Corvair Society of America (CORSAs), a non-profit organization that was incorporated to satisfy the common needs of individuals interested in the preservation, restoration, and operation of the Chevrolet Corvair. LVCC caters to Corvair people who live in and around the Lehigh Valley Region of eastern Pennsylvania. This is a very special car club! LVCC dues are \$10 a year for CORSA members or \$15 a year for non-CORSA members.

around the exhaust packings, head gaskets, or push rod tubes.

An easy way to identify engines with the "fresh air" system is the presence of the fan housing "arm" outlets and 2 inch cardboard hoses in the engine bay. The very last Beetles, produced until 2003 in Mexico, had this same "fresh air" system.

Now, it just so happened that, around the time when Volkswagen converted from the "stale air" design to the "fresh air" design, a man named John Petry suffered brain damage from inhaling carbon monoxide. Mr. Petry was a long-distance commuter who drove over 100 miles to and from work each day in his 1961 Corvair. A Philadelphia attorney filed a suit against General Motors on behalf of John Petry. The suit contended that the Corvair heating system allowed carbon monoxide to leak into the passenger compartment, poisoning Mr. Petry.

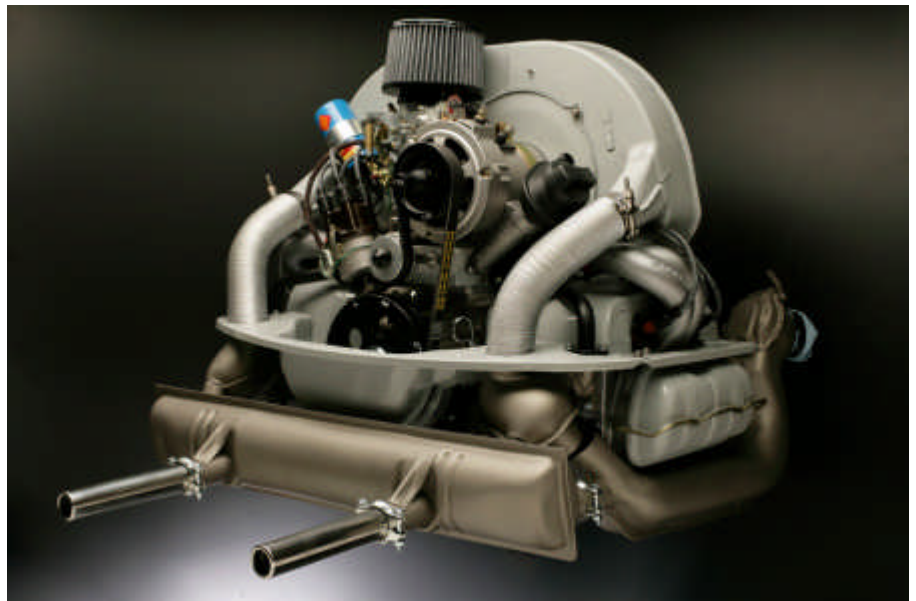
General Motors argued that it knew nothing of the problem and that there was no danger from the Corvair's heater. However, during a deposition, one of GM's engineers stated that the company had considered but not adopted a fresh air heating system, similar to Volkswagen's, that would prevent contact between engine-cooling air and passenger compartment warming air. General Motors settled the case out of court.

You may be wondering why Volkswagen improved its heating system whereas GM did not. They were forced to do it. In the early 1960s, the German government passed an act that made the old stale air design illegal. Porsche, with its similar air-cooled engine, was also forced to comply.

It must be pointed out that the new "fresh air" design was hardly foolproof, for the heat exchangers drew their heat from the engine exhaust headers. And so, if one of the exhaust headers splits open, corrodes, or develops a pin hole inside the exchanger box, then the heater becomes contaminated with ex-



Early Volkswagen "Stale Air" heating system took cooling air from the bottom shrouds of the engine and pumped it directly into the passenger cabin of the car. Note the thermostatically-controlled flaps at the rear of the shrouds. Chevrolet engineers copied this design for the Corvair "Direct Air" heating system.



And here is a later Volkswagen engine equipped all the components for the "Fresh Air" heating system. Clearly visible are two silver tubes coming down from the blower plenum to the heat exchangers located below the valve covers. From there, the heating air is blown forward to the interior of the car. The exhaust headers from the front cylinders are routed through the heat exchangers. These later engines have no bottom shrouds.

Goa



Like Volkswagen, Porsche equipped its 356 coupes and cabriolets with heat exchangers starting in 1963, but only for the German and Swedish markets. American buyers continued to get the "Stale Air" setup until the 911 arrived in 1965. The photo above shows the Porsche 356 heat exchangers, which are much larger (and therefore much more effective) than the Volkswagen equivalents.

haust gas, which in turn, introduces the very real possibility of carbon monoxide poisoning, just like the old stale air system.

Many Volkswagen enthusiasts remain very afraid of using the heaters in their Beetles, even those Beetles manufactured after 1962. But for what it's worth, the risk of such failure is less likely than leaky exhaust donuts or head gaskets inside the engine tin, for there are no exhaust couplings inside the heat exchanger boxes.

Porsche continued to use this heat exchanger design on its ultra-premium sports cars until it introduced the water-cooled 996 series engine in 1998. As you might expect, the heat exchangers on Porsches are more sophisticated, effective, and expensive than the ones installed on Beetles.

Today, a number of aftermarket suppliers fabricate replacement heat exchang-

ers from stainless steel to ensure the long-term integrity of these critical components.

LVCC MEETING NOTES.

President Bill Remaly chaired our October meeting. Attendees included Keith Koehler, Randy Kohler, Allan Lacki, Larry Lewis, Scott Oberholzer, Fred Scherzer, Dennis Stamm, and Dick Weidner.

Dick read the minutes from our September meeting and provided an update on the club's finances. In September, we had a balance of \$1,486.52. Since then, we received dues payments amounting to \$20 and spent \$17.46 on newsletter printing. Our current balance is \$1,489.06.

Dick also mentioned that the club had sent a condolence card to Randy Kohler, whose mother passed away. Every-

body at the meeting expressed their regrets.

It's Unanimous!

With the Holidays approaching in both November and December, the attendees voted unanimously to hold our next meeting in January at the usual place and time. LVCC will not be meeting in November and December. Our December issue of the Fifth Wheel will include contact info in case of inclement weather on the night of our January meeting. In the mean time, we wish you a Happy Thanksgiving!

Tech Discussion.

Larry Lewis asked the group for opinions on a problem he started having with his Corvair. While driving along the road late at night, the headlights began to flicker and then went out. Since then, the headlights have been working intermittently.

Fred Scherzer suggested that the problem may be caused by the floor-mounted headlight dimmer switch or perhaps the electrical connector to the switch. Over the years, the floor-mounted switch and connector tend to corrode due to exposure to wet shoes and slush.

The group agreed that this would be the first place to look, but other possibilities include a bad voltage regulator or perhaps the headlight circuit breaker, which is built into the switch in the instrument panel.

Show & Tell - Corvair Literature.

Dick Weidner passed around more items from his extensive Corvair literature collection for show-and-tell. Tonight, the objects of attention were his 1969 Corvair brochures and 1968 Chevrolet accessory book.

Dick pointed out that Chevrolet published very little Corvair literature for 1969, which was the last year of Corvair production. Fred Scherzer nodded in agreement and pointed out that

Chevrolet published very little literature for Corvair Monza wagons in 1962; their last year of production.

Shows and Swap Meets.

Fred Scherzer said he attended the massive Antique Auto Club of America show at Hershey earlier in the month, where he spotted four Corvairs for sale in the "car corral". One of the Corvairs was a late model sedan in very good condition with only 20,000 miles on the odometer and priced very reasonably at \$4,000. It was gone within an hour or two. A Corvair Corsa was also for sale, but given its condition, Fred believed it priced way out of the market at \$21,000. It just shows the wide disparity in Corvair pricing these days!

Al Lacki took his Corvair, LeHeap, to two shows last weekend; one at Lehigh Valley Hospital and the other at Long Park in Lancaster. At both locations, the car attracted many spectators who reminisced fondly about Corvairs they had owned when they were young. Al said kids are always fascinated by the fact that his Corvair has no engine in the front! Also, the fact that LeHeap hasn't flipped over in nearly fifty years tends to silence the occasional wise guy who mentions Ralph Nader.

Dick Remaly's Trivia Test.

Bill Remaly offered a little trivia test to the diesel engine enthusiasts in the room. It seems that one of the readers of "Old Car Weekly" magazine wrote a letter to the editor describing a recent purchase he had made. The purchase consisted of three old cans of "starting fluid capsules" marketed by Chevron. The reader knew he had found something rare and unique, but he wasn't sure how the capsules should be used. And even the editor was stumped. Bill thought he knew the answer, but he wanted to put the question before the members in attendance this night.

Some speculated that the capsules were to be used for starting-up diesel engines, but others said that truck manufacturers don't recommend the use of,

starting fluid in diesel engines because an excessive shot can damage the combustion chambers.

Then, Larry Lewis spoke up. He distinctly remembers certain diesel engines with air cleaners that were equipped with a plunger device designed specifically for these capsules. The procedure was simple: Insert the starting fluid capsule into the plunger cavity, slam the housing shut, and the capsule delivers a shot of starting fluid in just the right amount to help the engine fire up without risk of damage.

This, of course, led to more discussion about diesel engines, including air-driven starters in particular. Until the late 1970s, some engine manufacturers equipped their diesels with air-driven starters, rather than electric starters, as a means of circumventing battery problems during ice-cold weather.

Lehigh Valley Car Nut News.

Randy Kohler has been in touch with LVCC member Dave Riddle, who apparently has sold his lovely '63 Monza coupe which had been advertised in our newsletter.

Scott Oberholzer mentioned that he found a business card under his Corvair's windshield wiper recently. The card was from Dave Buzzard, formerly of the Blue Mountain Corvair Club. Dave remains active in buying and selling Corvair parts.

Scott Oberholzer highly recommended a visit to any of the Blue Mountain Antique Gas and Steam Engine Association's shows at Jacktown, PA. The next one will be held on January 19 2013 - yes, January - from 8AM to 4PM snow or shine. Make sure you are dressed for the weather. There will be a gas engine display, food available on the grounds and bring an empty soup can and get some free Hobo Stew.

NECC REVS UP FOR 2013

Al Lacki, our Northeast Corvair Council representative, attended an NECC Board Meeting on October 27 in Ho-Ho-Kus, New Jersey. The purpose of the meeting was to review financial results from the 2012 CORSA Convention at Sturbridge and to begin planning

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Read all about President Bill Remaly's trivia contest!!

NECC events for 2013.

According to NECC President Brian O'Neill, the 2012 Convention cleared more than \$14,000 in net income, which will be split 50/50 between CORSA and NECC. Harry Jensen advised Brian O'Neill that the CORSA office will be sending NECC's share of the income to NECC sometime in November.

Scheduling Around Other Events:

Brian mentioned that a number of Corvair racers plan to participate in the Mitty 2013 races, which will be held at Road Atlanta in Georgia in April. Also, the Detroit Area Corvair Club (DACC) plans to conduct a high-speed track event along with the 2013 Convention in Kalamazoo in July.

Possibilities for NECC Events in 2013:

Although Bay State Corvairs representative Ray Bombardier was not able to attend this meeting, Brian believes Ray would be receptive to NECC conducting an autocross or rally in conjunction with Bay State's bi-annual Corvair show at Clarks' Corvair. Brian recommended that the NECC event be scheduled the day before the Clarks' show, which is scheduled on a Saturday.

Brian also spoke on behalf of Blue Mountain Corvair rep John Egerton, who along with Dan Schmidt, could not attend today's meeting so they could finish a roofing job before Hurricane Sandy arrived. John told Brian that he runs his Corvair in autocross events conducted by an eastern Pennsylvania Corvette club that would like to do time trials with NECC at Pocono.

Brian has also been approached by Spence Sheppard, who offered the assistance of his CORSA chapter so that NECC can conduct Corvair Olympics in the Southeast in 2013. Potential venues include Virginia International Raceway (VIR) in Danville, Virginia; Carolina Motorsports Park in South Carolina; and Talladega in Alabama. VIR and Carolina Motorsports Park have drag-strips nearby, which make them good candidates.

Next Steps:

Brian O'Neill volunteered to call the various tracks and talk with Ray Bombardier on the possibility of having either an autocross or rally in conjunction with Bay State's Clarks Show. NECC will hold another meeting in December or January to follow up on Brian's findings.

LVCC Classified Ads!

FOR SALE: 1964 Monza Coupe. New paint. New Clarks interior, Clarks AM/FM cassette radio. Car has a 1965 110 engine and automatic trans. Brand new battery. Generator replaced by alternator. New gas tank and fuel sending unit. New fuzzies in the doors. Body and floor very solid \$4000.00 or best offer. Contact Dennis Stamm Sr. by phone at (610) 926-4723 or email at dmstamm@comcast.net



LVCC Calendar of Events!



Friday through Sunday, January 18-20, 2013 :: Auto-Mania Parts Flea Market & Corral.

Allentown, PA - Auto-Mania 2013, 23rd Annual Indoor Automotive Parts & Memorabilia Flea Market and Car Corral at the Agricultural Hall Allentown Fairgrounds. PA's Largest HEATED Indoor (NOW 50% Larger) Automotive Parts & Memorabilia Swap Meet and ALL NEW indoor & out door Car Corral (limited Car Corral Space so call ahead!) Admission \$7.00, Friday 12:00 noon - 9:00 pm, Saturday 9:00 am - 6:00 pm, Sunday 9:00 am - 3:00 pm!, P.S. This Event Does Not Cancel For ANY Reason! e-mail: tonyabilliii@yahoo.com or <http://www.automaniashows.com>

Saturday, January 19, 2013 :: Annual Snow Show at Jacktown Grove.

Not a Corvair event, but one of the first shows of the year on the East Coast, it is on January 19 from 8AM to 4PM snow or shine. Make sure you are dressed for the weather. There will be a Gas Engine display, food available on the grounds and bring an empty soup can and get some free Hobo Stew. Blue Mountain Antique Gas and Steam Engine Association, Inc. <http://www.jacktown.org/index.htm>

Wednesday, January 23, 2013 :: LVCC Membership Meeting.

Regular LVCC Club Meeting. 7:30 PM at the Lehigh and Northampton Transportation Authority (LANTA) office building in Allentown, Pennsylvania. The LANTA building is located at 1060 Lehigh Street Allentown, Pa 18103.

Directions: From I-78: Take Exit 57, Lehigh Street. At the end of the exit ramp, go east toward the City of Allentown. Follow Lehigh Street of approximately 2 miles - past the Parkway Shopping Center on the right and Faulkner Volkswagen on the left - until you reach the LANTA entrance on your left. It is at the intersection of Lehigh and South Howard Streets, right across from a Hess service station. Drive around to the auto parking lot and enter through the office entrance. Our meeting room is on the second floor.



Mail Dues to:

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Next Membership Meeting: Wednesday January 23, 2013