

# Heart of America Corvair Owners Association

# *VairCor*



February 2022

Volume 58-2



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## January Meeting

With a return to a regular meeting after December's holiday party, the club met on January 11 for the first meeting of the year.

Newly-elected president Scott Allison called the meeting to order and we started with updates on members. As many are aware, Kevin Koch has a rare form of liver cancer and is currently undergoing treatment. Along with this, Donna Hill's daughter, Yvonne, has breast cancer and John Martin is in the hospital with COVID. Taylor West and his children were exposed to COVID as well. Please keep them in your thoughts and prayers as they battle these ailments.

Seth O'Dell, new member from Prairie Village, was recognized by Don Wagner. Seth has a '62 van and wagon. Our new board members were also presented, including Taylor West, Helen Moore, Paul Sargeant, and Gary Jones. Returning board members were acknowledged and former board members were thanked for their service.

Treasurer Mike Dawson reported, which was a good segue for Don Wagner to mention payment of membership dues and updating our information. Webmaster Travis Bolton, along with Website Update Committee Chair Helen Moore and member Gary Moore, will be working to update or develop a new website. This is no small task, so thank you!

In the no surprises department, there were no parades to report and Ken Ragan still has tools in the tool crib and parts in his shop. Scott Allison took over for Social Chair Paula Roberts, who was absent. Plenty of events are coming up on the calendar, including the mid-winter tech session, Cold Tuna, and Corvair Performance Workshop. There are many more, including the Roundup (still need volunteers) so check the website.

Our meeting finished with members discussing projects they are doing or completed (more on those later). If you're able to make it, see you on February 8 for the next meeting!

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## HACOA Calendar at a glance

Date	Event
Tuesday, February 8	Monthly meeting, Paul and Jack's Tavern, North Kansas City, MO
Saturday, February 12	Round Up Planning/Preview, St. Paul Methodist Church, St. Joe, MO
Saturday, February 19	Cold Tuna, Kalp Kompound, Valley Center, KS
Tuesday, March 8	Monthly meeting, Paul and Jack's Tavern, North Kansas City, MO

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## President's Tapping

### February 2022

Apologies in advance for my tardiness this month in preparing my entry to our newsletter. Our editors are more than patient and gently reminded me that I now have a monthly task to perform which I had completely forgotten about. So, this won't be a lengthy entry and I'll hit on the need to know items.

Saturday the 12<sup>th</sup> is a meeting for Round Up prep in St. Joe. Please see the HACOA calendar for details. We'll meet at St. Paul's Methodist Church around noon. It is pot luck and everyone is welcome. Please contact Kat King if you do not have access to the website or have any questions.

Saturday the 29<sup>th</sup> is the Tuna in Wichita. I still have room for 1 more so let me know if you are interested in going and a caravan is always welcome should we have as many want to go as we had MCCA members present at Mike's Tech Session.

The Performance Workshop is March 4<sup>th</sup> and 5<sup>th</sup> in Miamisburg, OH, see the calendar for details.

Please pay your 2022 dues, accompanied by a form with your latest digits, and register for the Round Up. We have 2 registered so far and both are from our club.

Vairy Best Wishes, Scott

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## The Preventive Maintenance Series

Mike Dawson

### Torque Specifications

First off, contemporary torque values are generally listed as pound-feet or pound-inches, whereas you will note in the Corvair Shop Manuals it is expressed as ft. lbs., in-lbs. or in. lbs. For me, it is whatever pops off of the keyboard at the time!

Using a torque wrench for various Corvair items requiring assembly can be vital. The more complex operations would include engine rebuilding, suspension work, or transaxle work with the simple (but equally vital) operations including an oil filter change or spark plug replacement. For those who have not made memorizing shop manual specifications a priority, I would offer the following based on references and my experience, since there were several major torque value changes:

For example, from 1960 through 1964 a “range” was listed for 99% of the specifications, with single values only given beginning in 1965 and continuing until the end of production. I don’t like picking a number, I want it given to me precisely, so I use the 1965 Shop Manual (or later) for torque values.

In addition to the shop manual listings, there were TSB’s issued and correction sheets included in GM parts packages such as head gaskets. For example; head torque listings can be found ranging from 25 upper/28 lower (bored cylinders) in *The Classic Corvair* to 40 as noted in the January 1968 Chevrolet Service News. However, the February 1966 bulletin earlier said not to use 40 as 30 was sufficient. Personally I like to use 33 upper and lower.

Some values changed from 1961 to 1965 due to gasket material changes, such as the oil pan. Early pans with cork gaskets received 40-60 in.-lbs., while the second design utilized a hard paper gasket and 100 in.lbs. Spark plugs started out at 20-25 ft.lbs., and ended up at 20, with slightly less for a single “F” plug (one less thread). Flywheels were torqued at 20-26 in 1961 and ended up at 45 by 1965. Oil filters started at 9-15 and finished at 20 in ‘65. The four rear housing stud nuts started at 20-30 and ended at 45. In 1961 the crankshaft pulley was torqued to 60-80 but was reduced in 1964 to 45 (pulley or balancer).

All of the above examples are to reinforce checking late manuals if you are doing early work and also using common sense for some operations, such as valve cover gaskets. Also, tighten your lug nuts with the tool you would change a tire with (60 ft.lbs.), and to prevent late model front shock noises; tighten the lower mount to 80 ft.lbs. with an added flat washer to compensate for the nut running out of threads.

Following is a copy of many of the torque specifications as listed in the ‘65 and later manuals. However, many torque specs on transaxle overhaul and some of the other assemblies are included in the text for a specific operation.

## SPECIFICATIONS

### FRONT SUSPENSION

#### SECTION 3

Caster . . . . .	Positive $2^{\circ} + 1/4^{\circ} - 1/2^{\circ}$ *
Camber . . . . .	Positive $1^{\circ} \pm 1/2^{\circ}$ *
Steering Axis Inclination . . . . .	$6 1/2^{\circ} \pm 1/2^{\circ}$
Toe-in (Total)**	
Front . . . . .	$3/16''$ to $5/16''$
Wheel Nut Torque . . . . .	60 ft. lbs.
Wheel Bearing Endplay . . . . .	.001" to .008"
Speedometer Cable to Steering Knuckle	
Retaining Screw Torque . . . . .	40 in. lbs.
Upper and Lower Ball Stud Nuts Torque . . . . .	35 ft. lbs.
Backing Plate - Steering Knuckle - Steering	
Arm Bolt Torque . . . . .	45 ft. lbs.
Brake Anchor Bolt Torque . . . . .	80 ft. lbs.
Ball Joint Rotational Friction Torque . . . . .	2-4 ft. lbs.

Camber Cam Bolt Lock Nut Torque . . . . .	80 ft. lbs.
Stabilizer Bar Clamp Bolt Torque . . . . .	120 in. lbs.
Replacement Ball Joint to Control Arm	
Bolt Torque . . . . .	25 ft. lbs.
Cross Shaft Bolt Torque . . . . .	40 ft. lbs.
Riding Height:	
2 Door . . . . .	$2 1/2'' \pm 1/2''$
Convertible . . . . .	$2 1/4'' \pm 1/2''$
Measurements between sides should be within $1/2''$ of each other.	

\*Within  $1/2^{\circ}$  of opposite side.

\*\*Toe setting must always be made after caster and camber.

### REAR AXLE AND SUSPENSION

#### SECTION 4

#### REAR AXLE

Ratio (to 1) . . . . .	3.27, 3.55
Gear Backlash . . . . .	.003-.010"
	(.005-.008" desired)
Pinion Bearing Preload (in. lbs.) New . . . . .	5-10
Pinion Adjustment . . . . .	Shim
Differential Bearing Adjustment . . . . .	Sleeves
Bolt Torques	
Ring Gear . . . . .	50 ft. lbs.

Drive Spindle Flange . . . . .	125 ft. lbs.
Drive Spindle Yoke Nut . . . . .	100 ft. lbs.
Pinion Adjusting Sleeve Lock . . . . .	25 ft. lbs.
Differential Cover . . . . .	180 in. lbs.
Differential Carrier to Transmission . . . . .	45 ft. lbs.
Differential Carrier to Engine . . . . .	25 ft. lbs.
Axle Shaft Retaining Bolts . . . . .	15 ft. lbs.
Differential Carrier Filler Plug . . . . .	30 ft. lbs.

#### REAR SUSPENSION

*Toe-in (Total) Rear . . . . .	$3/16''$ to $5/16''$
*Camber (Rear) . . . . .	Pos. $1^{\circ} \pm 1/2^{\circ}$
*Camber must not vary more than $1/2$ degree from side to side. Toe setting must be made after camber is set.	
Bolt Torques	
Rear Wheel Spindle Support	
to Torque Control Arm . . . . .	40 ft. lbs.
Torque Control Arm Bracket	
to Underbody . . . . .	25 ft. lbs.
Front Strut Rod Outer Nuts . . . . .	13 ft. lbs.
Front Strut Rod Bracket to	
Transmission Support . . . . .	25 ft. lbs.

Torque Arm Bushing Pivot Nut . . . . .	75 ft. lbs.
Rear Strut Rod Outer Pivot . . . . .	80 ft. lbs.
Rear Strut Rod Inner Pivot . . . . .	35 ft. lbs.
Rear Strut Rod Bracket to	
Differential Carrier . . . . .	25 ft. lbs.
Rear Shock Absorber Lower	
Attaching Nut . . . . .	50 ft. lbs.
Rear Shock Absorber Upper Nut . . . . .	8 ft. lbs.
Wheel Stud Nuts . . . . .	65 ft. lbs.
Control Arm Rebound Bumper . . . . .	20 ft. lbs.



## SPECIFICATIONS 4

## TORQUES

Size	Usage	Torque
1/4-20	Oil Pan . . . . .	100 in. lbs.
	Oil Pump Cover . . . . .	70 in. lbs.
	Oil Cooler to Cylinder Head . . . . .	50 in. lbs.
	Shroud Attachment . . . . .	70 in. lbs.
	Valve Rocker Cover . . . . .	50 in. lbs.
	Oil Suction Screen Pipe Clamp . . . . .	40 in. lbs.
5/16-18	Crankcase L.H. to R.H. (One in Oil Sump) . . . . .	10 ft. lbs.
	Crankcase Cover . . . . .	10 ft. lbs.
	Oil Cooler Adapter to Crankcase . . . . .	10 ft. lbs.
	Oil Filter and Delcotron Adapter . . . . .	10 ft. lbs.
	Rear Housing . . . . .	10 ft. lbs.
	Clutch Cover and Pressure Plate . . . . .	20 ft. lbs.
11/32-24	Flywheel (Syn. Transmission) . . . . .	45 ft. lbs.
	Flex Plate (P/G Transmission) . . . . .	25 ft. lbs.
3/8-16	Oil Cooler to Adapter . . . . .	10 ft. lbs.
	Shroud Attachment . . . . .	15 ft. lbs.
	Skid Plate . . . . .	20 ft. lbs.
	Flywheel or Clutch Housing . . . . .	25 ft. lbs.
	Crankshaft Pulley to Balancer . . . . .	30 ft. lbs.
7/16-20	Crankcase L.H. to R.H. . . . .	55 ft. lbs.
	Oil Filter . . . . .	20 ft. lbs.
1/2-20	Crankshaft Pulley or Balancer . . . . .	45 ft. lbs.
5/16-24	Connecting Rod . . . . .	25 ft. lbs.
3/8-16	Exhaust Manifold Clamp . . . . .	25 ft. lbs.
	Rear Mounting Bracket . . . . .	45 ft. lbs.
	Stud - Cylinder Head to Crankcase . . . . .	20 ft. lbs.
	Switch - Cylinder Head Temperature . . . . .	15 ft. lbs.
3/8-24	Cylinder Head Nut . . . . .	40 ft. lbs.
	Valve Rocker Arm Stud . . . . .	40 ft. lbs.
	Adjusting Nut - Valve Rocker Arm . . . . .	100 in. lbs.
	Distributor Clamp Nut . . . . .	10 ft. lbs.
	Sending Unit - Cylinder Head Temperature . . . . .	10 ft. lbs.
	Switch-Cylinder Head Temperature . . . . .	15 ft. lbs.
1/2-20	Oil Pan Drain Plug . . . . .	35 ft. lbs.
1/8-27	Oil Pressure Switch . . . . .	55 in. lbs.
9/16-18	Oil Pressure Regulator Valve Plug . . . . .	15 ft. lbs.
14 mm.	Spark Plug . . . . .	20 ft. lbs.

## MOUNT TORQUES

Attaching Part	Torque
Front Mount Nuts	70 ft. lbs.
Bracket-to-Transmission	25 ft. lbs.
Front Mount-to-Crossmember	25 ft. lbs.
Rear Mount Nuts	30 ft. lbs.
Rear Mount-to-Frame	20 ft. lbs.

## Classifieds

### The Tool Crib

Club tools for rent

Contact: Ken Ragan

212 Warner Rd, Bonner Springs, KS 66012  
913-422-5778 E-mail: [kenrragan@gmail.net](mailto:kenrragan@gmail.net)

Tool	Deposit	Monthly rental fee
Harmonic balancer puller	\$3.00	\$1.00
Ramps, auto	\$4.00	\$1.00
Torque wrenches		
½ inch drive 20-150 ft/lb	\$15.00	\$2.00
¾ inch drive 100-1000 in/lb	\$15.00	\$2.00
Floor jacks and stands	\$25.00	\$3.50
Ring groove cleaner	\$3.00	\$1.00
Dwell/tach meter	\$5.00	\$1.00
Greaser: Fan and idler bearing	\$5.00	\$1.00
Ken's advice	\$.02	Grain of salt
Hubs: Rear (towing LM PowerGlide)	\$5.00	\$1.00
Pushrod tube extractor	\$10.00	\$2.00

Internally regulated 63  
amp Corvair alternators  
\$85 exchange



Rebuilt harmonic  
balancer  
\$105 exchange  
for a rebuildable  
core

Rebuilt Corvair  
starters with  
solenoid \$105  
exchange




Mike Dawson

[mdawson1961@sbcglobal.net](mailto:mdawson1961@sbcglobal.net)  
816-322-4057


Professionally rebuilt Corvair clutch disc on a  
welded center Borg & Beck core with a thickness  
of .325" \$55 exchange with same core.

Reproduced end plates for the 12 and 8  
plate oil cooler. These are the two pieces  
of sheet metal that help keep all the hot  
air from the oil cooler moving out the  
bottom instead of back in to the engine  
compartment. \$10 each





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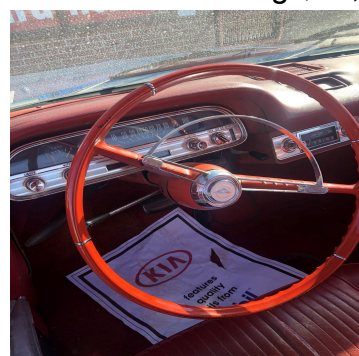
816-678-8860

[hrmoore14@gmail.com](mailto:hrmoore14@gmail.com)

- Dick Berger still has several sets of wheels and tires for sale. Most are 14" diameter. Let him know if you're interested. 678-650-4246

### 1963 Corvair Monza coupe

With Powerglide, located in Topeka. Contact Dick Berger for details 678-650-4246. Asking \$13,500.



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## Classifieds, continued

### Seats for sale from a '67 coupe; need to be recovered but good solid frames

Contact Dean Sego at: [see\\_dean\\_go@hotmail.com](mailto:see_dean_go@hotmail.com)



### Wilson Liter has several items for sale, including:

- 1966 transaxle, code AA (3.27 non-posi) and V8 bellhousing: \$400
- 140HP engine (code T0223RN). Engine turns over but has not been apart: \$600

Wilson Liter 417-667-6927. [wilsonliter@hotmail.com](mailto:wilsonliter@hotmail.com)

### Free-

- Late model block with two pulled studs (can probably be easily repaired).

Has 164 ci crank (will need turned) and -891 (110/140 HP) cam.

- 4 late model 13" wheels with old tires (decent tread but show cracking) and Monza wheel covers.

Contact Chris Green (call or text) 913-369-5861 or email: [hacoa1news@gmail.com](mailto:hacoa1news@gmail.com).

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## Other Events and Tidbits

### Winter Tech Session

Mike Dawson

Saturday, January 22, was the date of our annual Winter Tech Session and it turned out to be a good combination of tech information discussions, dining, and socializing. We had a total of 29 attendees, including long distance members Terry Kalp, Keith Hammett and the Wagner's. We also had three guests from the Wichita area; Bill Smith (joined HACO A that night), Nick Pool and Bob Ferenc. Two of our newer members that attended were Dwight Hamby and Rusty Schaefer.



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After everyone had arrived, I called Kevin Koch who is enduring an aggressive chemo treatment, and the group gave him a rousing greeting over the phone. We are all wishing Kevin the best of care (and as Kevin said, some good luck would help).

During the sit down, we covered 51 old age issues, parts issues and preventive maintenance items in an hour and a half, so we moved along at a pretty good clip. Three ladies joined the group in the garage: Kat King, Bri Schaefer and Cindy Anders. The upstairs session was attended by Sandy, Dorothy, Sharon, Barbara and Kim.

Feeding time included steak soup, Mex-chicken stew, and lots of accompanying bread, veggies, fruit and desserts. There were left overs, so nobody went home hungry. A special thanks to Floyd Becker who donated the meat for the steak soup.

We ended the evening with a lot of socializing and door prizes consisting of multimeters, hats and some miscellaneous items donated by O'Reilly's.

We have a working tech session scheduled for June 4 (same location but with the doors open!) and encourage all who are interested to come; either to fix, learn or just hang out.

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### **John Martin**

John Martin remains in rehab in a hospital in Cameron still trying to recover from a Covid infection. He was admitted to the Belton Hospital on December 21, wound up in the ICU and was transferred to Centerpoint Hospital in Independence, still in an ICU. He has been transferred again to the Cameron Rehab Center where as of today (1/31) is still struggling with breathing issues and cannot go home.

John said he was worried a little about his Corvair sitting too long without being driven. Hopefully, John will be home and putting the top down as spring arrives. Between John's earlier shoulder injury and the current issue, Martha has had her work cut out for her as caregiver for over two years now.

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### **SCCA Hall of Fame**

Our own Charlie Clark was inducted into the Sports Car Club of America (SCCA) Hall of Fame on January 21. The entire presentation can be viewed at: [https://www.youtube.com/watch?v=a6Avtd\\_XAAo](https://www.youtube.com/watch?v=a6Avtd_XAAo). Congratulations Charlie on a job well done!

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### **Courtesy Lights Install & Repair Headlight Switch**

Don Wagner

One night at the club meeting as I was going to my car Dominique Allen showed his '65 convertible courtesy lights and I noticed how bright they were. He had put Clark's bright bulbs in his courtesy lights which are to put 55% brighter light out. I told my wife that I needed to put those in both of my cars. (convertible and 4dr car). The challenge was on to put bulbs in the cars to lighten up the interior. I thought I



would put them in my 4dr first as the dome light doesn't light the inside very well. I decided to talk to Mike Dawson and Jim Allen about how to wire the lights up. I found one courtesy light & support but I needed two. Gary Jones was going to another club member's house to see if he could come up with two supports & sockets which he did (rust with more rust but I got them to work).

Convertibles have courtesy lights already so all you need is two brite bulbs.

This is what you will need before starting all other models.

#### Parts to do the courtesy lights.

2 supports for sockets to go under the dash. You can get these from Clarks or make them.

2 sockets you can get these from O'Reilly Auto parts No. 85806

Single Contact  $\frac{3}{4}$ " socket (bulb size 1156) will need to solder ground wire on to socket

2 bulbs C603B from Clarks –Brite bulbs for the courtesy lights -\$8.65 each.

A roll of 18 gauge wire

2 screws to hold support to the dash.

This is how I wired the courtesy lights up on my 4dr. My car has AC which means all hoses and evaporator are up under the dash area. DISCONNECT BATTERY

1. Go to the door jamb switches, unscrew both and pull switch wires out. Take the wire that you are going to connect to the ground wire and feed it through the switch hole on down into the dash area. (leave extra wire when you cut the wire off) Next connect the wire that hooks to the switch wire and reconnect door switches back in.. This starts the ground which is going from one switch to the other.

2. Locate where the two lights are going to be placed and install both. The ground wire from the both switches should be connected to sockets on both sides. Take another wire and connect to the two lights to get a ground; this will go from one side of the car to the other. ( plastic sockets are the best but if you have metal sockets make sure the supports are not ground to the dash.

3. Next take the two hot wires from the sockets and connect to the fuse box.

#### This is the way the wires should be hooked up.

Door Jamb Switch -----ground W-----Light-----ground W----Light-----Door Jamb Switch

Hot wires (Light) -----tie all hot wire together –go to fuse box------(Light)



### Repair Headlight Switch

The headlight switch when you turn it to the left the dome and courtesy lights should work. My switch didn't work so I was told that I may be able to fix it. You don't have to take the dash all out to get the switch out.

1. Put your hand up to the top of the switch and push down on the shaft retainer.
2. Pull the headlight knob and shaft out all the way and push down on the retainer.
3. Once you get the switch out, clean it up well.
4. Then turn the switch left and you will see a clip at the bottom of the switch.
5. You will need to take sandpaper to rough the area where the clip comes in contact with the metal case. (this makes a ground)

The headlight switch will turn the courtesy & dome lights on when you are done.

### Roundup Planning/Preview

I've decided to have this first organizational meeting and social at the church, in their community room. That way everybody will see how the grounds are laid out and how easy it is to find the church (a lot of HACOAs members have been there for car shows before).

Directions: Hwy I-29/ exit 53 (Savannah exit). Next door to the filling station.

Everybody welcome! Saturday, February 12th. Noon

There will be a potluck lunch with brisket, drinks, and serveware supplied. Each CHAIR can formally ask for their volunteers at that time and report how their projects are progressing.

An RSVP to Kat is helpful but not required if you find you can make it at the last minute. If you have volunteered to chair any event at the Round Up and cannot make it, let Kat know as we are hoping for a majority to be able to make some headway on questions and plans.

Thank you, Kat

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## Poppies for Patriots Calendars

As mentioned at the January meeting, Bri Schaefer has Poppies for Patriots calendars available for \$15 each. You might catch her (or Caleb) at the next meeting or visit their website:

<https://midwestpoppiesforpatriots.com/>

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## !!!!!!!!!!!!HACO A Dues!!!!!!!!!!!!

If you haven't already, make sure to pay your \$15 membership dues for this year, which can be mailed to Mike Dawson (16001 Oakland, Belton, MO 64012), or brought to the next meeting.

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## Remember→ CORSA Membership Perks:

1) CORSA now has a formal relationship with Mecum auctions! Your membership in CORSA now permits you to purchase the \$200 bidders registration for just \$100!!

2) We have many fresh new items of CORSA-wear now available on our website. [www.corvair.org](http://www.corvair.org)  
<http://www.corvair.org>. We have a new vendor, new artwork and new items. I think you'll be excited about the selection.

3) Please remember, if you have members who are new to CORSA, they will receive a free copy of the "Corvair Basics" book with their paid membership in CORSA.

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## HACO A birthdays

February	
Name	Date
Mark Whitman	8
Christine Bacon	9
Irmajean Barta	14
Don Wagner	15
Fred Bybee	19