



## Newsletter September 2020

### Elected Officers

**President:** Ron Howard  
**Vice-President:** Cathy Cardoza  
**Secretary:** Paul Mitchell  
**Treasurer:** Carol Misner  
**Sergeant-at-Arms:** Patrick Smith  
**Membership:** Robin Miranda  
**Past President (2019):** Ron Howard

### Appointed Positions

**Sunshine:** Sandee Anderson  
**Activities:** Cathy Cardoza  
**Event Reminder:** Pat Dobson  
**Internet Site:** Sharon Hook-Martino, Elaine Ellis  
**Parade Coordinator:** Sheron Leigh, Kerry Razza  
**Natl Corvette Museum:** Len Atlas  
**Historian:** Group Effort  
**Photographer:** Group Effort

### Next Club Social

The next club social is **Saturday, September 19, 5:00 p.m.**, at **Jimmy's Classic Drive-In**, 515 NE E St., Grants Pass.

Food is cooked to order, so allow 20 to 30 minutes for food preparation if your order is placed when you arrive.

For fastest service, order online no later than 4:00 p.m. before you leave home on Saturday, at this web address:

<https://jimmysgp.com>

Click on "Order online" ... select your individual sandwich (or sandwich-plus-drink-plus-fries meal items), with bunches of optional sauces and choices, then pay online.

**Be certain to add this "Note" when you pay:**

**"Corvette Club, pickup at 5:00 PM"**

### October Birthdays

Tom Agee	Marlene Ellison
Elizabeth Baldrige	Ron Jones
Florin Baldrige	Julie Morgan
Joe Chavez	John Peterson
Darren Clark	David Raskin

### Upcoming Meeting

**General Membership Meeting**, Wednesday, **October 7, 2020, 6:00 p.m.** at the **Palmerton Park, 300 West Evans Creek Road**, Rogue River

**Visitors are always welcome!**

### Why Join SOCA?

- Promote *esprit de corps* among Corvette enthusiasts.
- Create interest in the Corvette as a true dual-purpose sports car.
- Provide a means of technical information and service to members.
- Encourage dealer and manufacturer cooperation.
- Organize and promote events of a social nature and provide social gatherings for enthusiasts with common interest.
- Sponsor or participate in activities to benefit the community through recognized charities as selected by the members of the Association.

### SOCA Logo Apparel

Competitive Athletics, 105 NE 7th St., Grants Pass  
(541) 479-1001





WWW.SOVETTE.COM



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## 2020 Southern Oregon Corvette Association (SOCA) Events

	Oct	Nov	Dec
Club meeting (Wed.)	7	4	2

(Most dates, times and locations listed below are tentative after September 30. All dates are Saturdays, except as noted.)

### SEPTEMBER

Parade	7 – (Labor Day) Cave Junction parade (canceled)
Sigel Show & Shine	12 – Jim Sigel Show & Shine, Grants Pass
SOCA Social	19 – Jimmy’s Classic Drive-In, 515 NE E St., Grants Pass (see instructions on page 1)

### OCTOBER

Cruise	10 – Sea Cruise Outdoor Museum Car Show, Crescent City, Oct. 9-11 <a href="https://www.facebook.com/Seacruiseclassiccarshow/">https://www.facebook.com/Seacruiseclassiccarshow/</a>
SOCA Social	17 – Medford

### NOVEMBER

Thanksgiving	26 – Thanksgiving holiday
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### DECEMBER

Parade	5 – Grants Pass Christmas Parade
SOCA Social	19 – SOCA Christmas Party, Grants Pass Golf Club, 230 Espey Rd., Grants Pass

For additional events, information and links ... see the SOCA website “Events Page.” <https://www.sovette.com/events>



Lucky 7 Casino Car Show, Smith River, California  
August 15, 2020



Lunch at the Chart Room, Crescent City, California  
August 15, 2020

### Southern Oregon Corvette Association 2020 membership dues

Dual membership: \$50.00      Single membership: \$35.00      Initiation (one-time): \$15.00

Make checks payable to “SOCA” and mail to: SOCA, 2603 Garden Meadow Dr, Grants Pass OR 97527



## Techin & Toolin



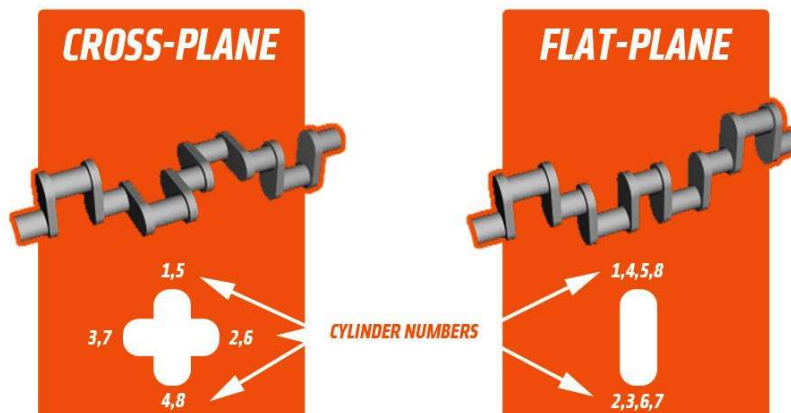
Chevrolet has released more details about the next-generation Corvette C8.R race car. It will be powered by an all-new naturally aspirated double overhead camshaft, 32 valve, 5.5-liter V8 with a flat-plane crankshaft.

### What Is A Flat-Plane Crank and Why Is It So Loud? - Jason Torchinsky - 11/17/14

Most V8 engines we know and love today — the ones with that distinctive V8 burble-sound and those 'bundle of snakes' types of exhaust manifolds — are not *flat-plane crank* designs. They are something known as *cross-plane crank* engines, and they are the norm enough now that this *flat-plane* business is news.

The fundamental difference in cross-plane and flat-plane crankshaft designs can be well inferred from their names. That means that the crankshaft is really a sort of 2D-shape: just the square-wave up-and-down style crankshaft you probably picture in your head when you think of a basic crankshaft. Inline (and flat) four-cylinder engines generally use this sort of crankshaft.

*Cross-plane cranks* are called that because when you look at them head-on, they seem to form a + or cross shape, where a flat plane will form a simple | shape. This is because cross-plane crankshafts have 90° angles between the crank throws, where the pistons connect. This diagram explains it all:





Early V8 engines were all flat-plane cranks because that is a simpler, more straightforward design. A flat-plane crank V8 is really like a pair of mated I-4s, and there are some issues with them, the biggest issue being balance and vibration issues, specifically secondary balance and vibration issues.

A flat-plane V8 can generate a significant amount of vibration, especially on large displacement engines. To correct this, the cross-plane crank was developed in the 1920s primarily to make everything nice and smooth. To achieve this, a cross-plane crank sets things up so that there's unevenly-spaced firings in each cylinder bank, but even cylinder firing over both banks, which keeps things balanced and gives cross-plane V8s that burble sound we all love.

The price of this balance and smoothness is weight and size. A cross-plane crank is inherently larger because it has crankpins on two axes. It is much more heavily counterweighted and balanced, all of which require a larger, heavier crankcase to hold it all, which makes a less favorable overall weight and center of gravity.

Also, the heavier, counterweighted crankshaft simply cannot be spun/revved as quickly as a lighter one. These disadvantages all bring us to the reasons why a flat-plane crankshaft may be desired at all: it is lighter, it is smaller, and it can rev much, much higher. How much higher? Some say up to 8000 RPM, which, on a V8, I think we can all agree is bonkers.

Of course, this all comes at a cost of much more engine vibration, but if you look at all the advantages, they point to one specific application: racing.

A racing engine that is light, small, and revs to high numbers is far more important than one that has a bit of the shakes. Ask Ferrari — they use them on *all* their V8s. And, with modern, lightweight materials and interesting new designs, a surprising amount of that vibration can be mitigated, as Ford has most likely done. They already proved they could make a surprisingly well-balanced 3-cylinder engine — it's very reasonable to assume many of those lessons would be applied to much larger powerplants.

A flat-plane engine can also scavenge exhaust from the cylinders in a more efficient way, which offers performance and efficiency boosts as well, with less complex exhaust manifolds. Interestingly, people have been thinking about all the advantages of the flat-plane crank in relation to Mustangs for quite a while, and some folks have predicted this at least as far back as last year.

“Why the engine is so loud?” you might ask. It is really a combination of several factors: the higher revs are absolutely a factor because it is cramming more noisy power strokes into a shorter period of time. Also, the use of lighter weight materials throughout (to counteract the vibrational forces) is likely making things a bit louder as well, because thinner, lighter parts are probably less effective at deadening sound than a heavier, denser material would be.

And I am sure there is shrieking of the driver as he or she realizes this big V8 is revving up like a sport bike engine or something. That can get loud, too.



**Disclaimer** - Discretion is advised. The preceding information may not apply to specific vehicles or all circumstances. Always refer to the manufacturer's specifications, service manuals, technical data, and product information.

*“Thank you” to Florin Baldrige for providing “Techin and Toolin” articles for the SOCA newsletter each month.*

