



## Newsletter January 2021

### Elected Directors

<b>President:</b>	Cathy Cardoza
<b>Vice-President:</b>	Ron Howard
<b>Secretary:</b>	Paul Mitchell
<b>Treasurer:</b>	Carol Misner
<b>Sergeant-at-Arms:</b>	Wayne Shelford
<b>Membership:</b>	Robin Miranda
<b>Past President (2020):</b>	Ron Howard

### Appointed Positions

<b>Sunshine:</b>	Sandee Anderson
<b>Activities:</b>	Ron Howard
<b>Internet Site:</b>	Sharon Hook-Martino, Elaine Ellis
<b>Parade Coordinator:</b>	Sheron Leigh, Kerry Razza
<b>Natl Corvette Museum:</b>	Len Atlas
<b>Historian:</b>	Group Effort
<b>Photographer:</b>	Group Effort

### Next Club Social

The next SOCA Social is tentatively planned for Saturday, February 13 at 5:00 p.m. at a location to be determined, and depending on State of Oregon COVID-19 guidelines in effect at the time.

### Upcoming Meeting

**General Membership Meeting**, tentatively set for Wednesday, February 3, 2021, 6:00 p.m. at the Rogue River Community Center, 132 Broadway St., 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

“Vettes For Coffee” is a new weekly SOCA event where Corvette owners can gather in parking lots near establishments that sell coffee “to go.” Designed as a chance for Corvette owners to get out of the house and safely socialize with fellow Corvette enthusiasts (with masks/face coverings and social distancing when required), we hope you can join us at the first two January events.

The first “Vettes For Coffee” event will be **Wednesday, January 20 at 10:00 a.m.** in the parking lot far outside of the McDonald's at 1610 Allen Creek Road in Grants Pass. Park away from the McDonald's building in the large parking area between the Albertsons building and McDonalds.

The second “Vettes For Coffee” event will be **Tuesday, January 26 at 10:30 a.m.** in the parking lot far outside of the In-N-Out Burger at 1970 Crater Lake Hwy, Medford. Park away from the In-N-Out building in the large parking area between the Rogue Valley Mall building and In-N-Out Burger.

### **Southern Oregon Corvette Association 2021 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





WWW.SOVETTE.COM

P.O. Box 865 • Medford, Oregon 97501  
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## 2021 Southern Oregon Corvette Association (SOCA) Events

	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Club meeting (Wed.)	3	3	7	5	2	7	4	1	6	3	1

(All dates below are Saturdays, except as noted. The dates are tentative.)

### JANUARY

Vettes For Coffee	20 – Wed. <b>10:00</b> a.m., parking lot outside the McDonald's, 1610 Allen Creek Road, Grants Pass
Vettes For Coffee	26 – Tue. <b>10:30</b> a.m., parking lot outside In-N-Out Burger, 1970 Crater Lake Hwy, Medford

### FEBRUARY

Social	13 – Location and time TBA
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### MARCH

(Daylight Savings Time starts March 14)

Social	13 – Location and time TBA
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### APRIL

Parade	** – Pear Blossom Parade
Social	17 – Location and time TBA

### MAY

Parade	** – Merlin Parade
Social	15 – Location and time TBA

### JUNE

Parade	** – Rooster Crow Parade
Social	12 – Location and time TBA

### JULY

Parade	** – Eagle Point Parade
Corvette Weekend	9 to 11 – SOCA 2021 <b>Corvette Weekend</b> (and the July Social)

### AUGUST

Social	14 – Location and time TBA
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### SEPTEMBER

Social	11 – Location and time TBA
Sigel Show & Shine	** – Jim Sigel Show & Shine, Grants Pass

### OCTOBER

Social	16 – Location and time TBA
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### NOVEMBER

(Daylight Savings Time ends November 7)

Social	13 – Location and time TBA
Thanksgiving	25 – Thanksgiving holiday (Thursday)

### DECEMBER

Parade	4 – Grants Pass Christmas Parade
Social	** – Christmas Party

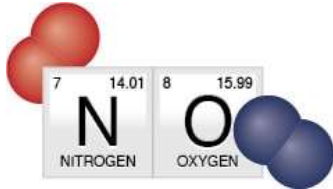
For additional events, information, and links ... see the SOCA website "Events Page:" <https://www.sovette.com/events>



## Techin & Toolin

# CLEARING THE AIR ABOUT NITROGEN TIRE INFLATION

-Tire Rack -



One of a tire's primary tasks is to carry the weight of the vehicle. But anyone who has ever had a flat tire knows the tire does not really carry the load...the inflation pressure inside it does! Using the correct inflation pressure not only provides the appropriate load capacity, but it also enhances the tire's performance, durability, and contribution to vehicle fuel economy.

Tires are typically inflated with air that is a combination of roughly 78% nitrogen (N<sub>2</sub>), 21% oxygen (O<sub>2</sub>), and 1% miscellaneous gasses. Because all gasses expand when heated and contract when cooled, tire inflation pressures rise and fall with changes in temperature by about one PSI (pound per square inch) for every 10 degrees Fahrenheit change in temperature. This is one of the reasons it is recommended tire pressures be checked early in the morning before ambient temperatures, the sun's radiant heat, or the heat generated by driving causes the tire pressure to rise.

And while tires appear solid, if you could see their microscopic structure you would find that rubber looks a bit like strands of cooked spaghetti stuck together. These molecular strands continuously stretch from their relaxed state every time the tire rolls and conspire to allow some of the gas to escape through the microscopic spaces between the rubber molecules (called permeation or diffusion). It has been estimated up to one PSI of pressure may escape each month a tire is in service.

Fortunately, compressed air is often available at gas stations, tire stores, and auto repair shops. Sometimes it is free or other times it is only available from coin-operated compressors. Unfortunately, the compressed air often contains varying degrees of moisture depending on relative humidity and the compressor system's ability to dry the air by removing moisture.

What can we do to maintain more constant tire pressures? We could change what we inflate our tires with. Pure nitrogen has been used to inflate critical tire applications for years, primarily because it does not support moisture or combustion. These include racing tires (IndyCar, Formula 1, NASCAR), aircraft tires (commercial and military), and heavy-duty equipment tires (earthmovers and mining equipment). The challenge facing nitrogen inflation has not been in application, it has been the method of supply and cost.

Nitrogen molecules have a more difficult time escaping through the microscopic spaces between a tire's rubber molecules. Nitrogen is a "slow" inactive gas labeled as an "inert" gas due to its nonreactive nature with many materials. Oxygen on the other hand is a "fast" active gas that reacts with many materials, a process named "oxidation." Additionally, nitrogen is a dry gas that does not support moisture while oxygen combines with hydrogen to produce water (H<sub>2</sub>O).

What are the effects of using pure nitrogen to inflate tires?

- Nitrogen is a gas and is still affected by changes in ambient temperature (about one PSI for every 10 degrees Fahrenheit change). Nitrogen-filled tires will require additional pressure during the fall/winter months as ambient temperatures and tire pressures decrease. Nitrogen is good but cannot change the laws of physics.
- Nitrogen reduces the loss of tire pressure due to permeation through rubber over time by about 1/3. This helps maintain the vehicle's required tire pressures a little longer but does not eliminate the need for monthly tire pressure checks. This is good for people who do not regularly maintain their vehicles.
- Nitrogen is a dry gas and will not support moisture that may contribute to corrosion of the tire's steel components (bead, sidewall reinforcement, and belts) due to the absence of moisture over extended periods of time. However, atmospheric pressure is constantly pushing oxygen and moisture into the



rubber from the outside of the tire. This is especially good for low mileage drivers who do not quickly wear out their tires or those who run average annual mileages but use long wearing radial (60,000- and 80,000-mile warranted) tires.

- Nitrogen assures more consistent pressure increases from increases in operating temperature in a racing environment because of the absence of moisture. This is especially beneficial for participants in track days, high-performance driver education schools and road racing.
- Drivers should use standard air if pressure adjustments are required and when a local source of nitrogen is unavailable during a trip. While this practice reduces the benefit of higher nitrogen content, it is far better than running the tires underinflated in search of a pure nitrogen source. Often the original nitrogen provider will refill the tires for free or for a nominal charge when the driver returns to his/her hometown.

Several service equipment manufacturers have developed small, on-site nitrogen generator systems that use the selective permeation principle to separate oxygen and moisture from nitrogen in the shop's compressed air lines. The key component is a membrane that separates the gasses. Each module contains hollow fibers that allow the oxygen and water vapor to be selectively removed, resulting in a source of nearly pure nitrogen that is kept in a separate storage tank until it is used to inflate tires.

The nitrogen generator, storage tank and filling system are not free, and the dealer is entitled to some return on his investment. It is time-consuming for a technician to bleed air from the tires (sometimes requiring several purges during the initial inflation) to achieve the desired nitrogen purity. However, some of the latest equipment automatically goes through several purge cycles without requiring the technician's participation.

While inflating tires with nitrogen never results in 100% purity, most nitrogen service equipment providers advise reaching at least a 93% to 95% purity is necessary to receive the desired benefits. This ratio is normally achieved by initially purging the tires of existing air (down to just a few PSI) and then refilling them with nitrogen. The purge/fill cycle is often repeated to achieve the desired level of nitrogen purity.



Note: Tires should never be subjected to a vacuum to eliminate the oxygen. Distorting the tire as shown in the accompanying picture can be as detrimental to the internal structure of the tire as running over potholes and road hazards.

So, what should drivers do? Overall, inflating tires with nitrogen will not hurt them and may provide some minimal benefits.

Is it worth it? If you go someplace that provides free nitrogen with new tires, why not? Additionally, we have seen some service providers offering reasonable prices of about \$5 per tire (including periodic adjustments for the life of the tire) to a less reasonable \$10 per tire (with additional costs for subsequent pressure adjustments) or more as part of a service contract, which we believe exceeds the value of nitrogen's benefit.

Rather than pay extra for nitrogen, most drivers would be better off buying an accurate tire pressure gauge and checking and adjusting their tire pressures regularly.



**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.*

