SOUTHERN OREGON CORVETTE ASSOCIATION, LLC
WWW.SOVETTE.COM
106 NW F St. # 222, Grants Pass, Oregon 97526
501(c) (7) Non-Profit Organization • Federal Tax I.D. #91-1819589

Southern Oregon Corvette Association

October 2023

Newsletter

SOUTHERN OREGON CORVETTE ASSOCIATION, LLC
WWW.SOVETTE.COM
106 NW F St. # 222, Grants Pass, Oregon 97526
501(c) (7) Non-Profit Organization • Federal Tax I.D. #91-1819589

October 2023 NEWSLETTER

Next Club Social

The next club Social is on Oct 21, 2023. For more information, see the “Events” section (page 5) for details.

Upcoming Meetings

General Membership Meeting, Wednesday, November 1, 2023, **6:30 p.m.** at the Rogue River Community Center, 132 Broadway Street, 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 interests.
•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

OFFICERS:

SOUTHERN OREGON CORVETTE ASSOCIATION, LLC

WWW.SOVETTE.COM

106 NW F St. # 222, Grants Pass, Oregon 97526
501(c) (7) Non-Profit Organization • Federal Tax I.D. #91-1819589

Elected Officers

President:	Ron Howard
Vice-President:	Wayne Shelford
Secretary **(appointed):**	Kathy Korzeniecki
Treasurer:	Carol Misner
Sgt-at-Arms:	Larry Weiner
Membership:	Robin Miranda
President (2022):	Cathy Cardoza

Appointed Positions

Sunshine:	Sandee Anderson
Activities:	Kim Moore
Communications:	Gar Stevens
Internet Site:	Sharon Hook-Martino, Elaine Ellis
Parade Coord:	Kerry Razza
Natl Corvette Museum:	Len Atlas
Facebook::	Tammi Moore
Newsletter:	Rob Hill

BIRTHDAYS AND ANNIVERSARIES:

SOUTHERN OREGON CORVETTE ASSOCIATION, LLC

WWW.SOVETTE.COM

106 NW F St. # 222, Grants Pass, Oregon 97526
501(c) (7) Non-Profit Organization • Federal Tax I.D. #91-1819589

October Birthdays

Tom Agee	Terry Asberry
Joe Chavez	Darren Clark
Ron Jones	Matthew Lounsbury
John Mann	Aaron Markley
Tony Meadows	John Mota
John Peterson	David Raskin
Florin Baldridge	Elizabeth Baldridge
Don Wilson	Trudy Bignotti
Dana Smith	Julie Morgan
Elaine Redd	Marlene Ellison

October Anniversaries

Brandon Bretl & Nichola Hayden

EVENTS:

SOUTHERN OREGON CORVETTE ASSOCIATION, LLC

WWW.SOVETTE.COM

106 NW F St. # 222, Grants Pass, Oregon 97526
501(c) (7) Non-Profit Organization • Federal Tax I.D. #91-1819589

2023 **Southern Oregon Corvette Association (SOCA) Events**

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

All dates below are Saturdays, except as noted … The dates shown are tentative and subject to change or cancellation.

September:

Car Show: 6-7 Sea Cruise in Crescent City

Social: 21 Si Casa Flores, 202 NE Beacon Dr, Grants Pass, 6pm

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

Car Shows:

SOUTHERN OREGON
CORVETTE

WWW.SOVETTE.COM

106 NW F St. # 222, Grants Pass, Oregon 97526
501(c) (7) Non-Profit Organization • Federal Tax I.D. #91-1819589

July 4 Eagle Point parade-SOCA to attend.
July 8 Timberland Corvette show- Graffiti Weekend-Roseburg. SOCA to attend
July 15 Lady Stangs Annual Car Show-Hidden Valley High
July 16 Concours d'Elegance- Forest Grove
July 20 Back to the 50's-Grants Pass- Pre '79 Cars
July 21 Show & Shine on the Parkway
July 20-22 VetteFest- Boise Idaho-SOCA to attend.
August 12 Corvettes on the Bay-Coos Bay-SOCA to attend.
Sept 9 Jim Sigel Corvette Show-SOCA EVENT
Sept 7-10 Reno-Tahoe Tour-Lake Tahoe Corvettes
Sept 14-17 Corvettes on the Columbia
October 6-7 Sea Cruise- Crescent City-SOCA to attend

Remember to take photos at SOCA events, send them to Sharon Hook, and selected photos will appear here on the sovette.com website!

PHOTO GALLERY

SOUTHERN OREGON CORVETTE ASSOCIATION, LLC

WWW.SOVETTE.COM

106 NW F St. # 222, Grants Pass, Oregon 97526
501(c) (7) Non-Profit Organization • Federal Tax I.D. #91-1819589

Social at Jackson Street Pizza on Sept 16, 2023:

Remember to take photos at SOCA events, send them to Sharon Hook, and selected photos will appear here on the sovette.com website!

PHOTO GALLERY

SOUTHERN OREGON CORVETTE ASSOCIATION, LLC

WWW.SOVETTE.COM

106 NW F St. # 222, Grants Pass, Oregon 97526
501(c) (7) Non-Profit Organization • Federal Tax I.D. #91-1819589

Corvettes on the Columbia Car Show in Washington on Sept 14-16

The Three Different Types of Electric Car Motors and How They Work - by Nikesh Kooverjee, TopSpeed•

- Electric vehicles have gained popularity due to a focus on reducing carbon emissions and fossil fuel dependence, with advancements in electric car technology making them more accessible to consumers.
- Three types of electric motors prevail in EVs: synchronous permanent magnet motor, electrically excited synchronous motor, and asynchronous induction motor, each with unique characteristics that cater to different needs of electric vehicles.
- The synchronous permanent magnet motor provides simplicity, control, high power density, and efficiency, making it suitable for electric cars that prioritize space and energy conservation. The electrically excited synchronous motor offers efficiency, longevity, and adaptability, providing precise control over speed and torque. The asynchronous induction motor boasts robustness, versatility, and efficiency, making it suitable for various driving conditions and load conditions.

Electric vehicles have experienced a rapid rise in popularity in recent years, indicating a transformative shift in the automotive industry's pursuit of eco-friendly alternatives to gas-guzzling internal combustion engines. These green alternatives have come about due to an increasing importance on carbon emissions and fossil fuel dependence reduction, with innovations in electric car technology becoming more accessible and appealing to public consumers. The electric motor is a central part of the functioning of EVs. These convert electrical energy to mechanical energy to propel a car forward without the emissions associated with traditional engines.

Three noteworthy types of electric motors prevail in EVs. These are the synchronous permanent magnet motor, the electrically excited synchronous motor, and the asynchronous induction motor. Each of these options has unique characteristics, benefits, and working principles, catering to multiple needs and specifications of electric vehicles. Exploring the intricate details of these motors provides insight into their contribution to the operational quality and environmental sustainability of electric vehicles, underlining their crucial role in the evolving automotive landscape.

Synchronous Permanent Magnet Motor: Simplicity and Control

The synchronous permanent magnet motor is an important component in modern electric vehicles and is renowned for its efficiency and compact design. The rotor in these motors is embedded with permanent magnets that synchronize the rotor’s speed with the stator’s rotating magnetic field, ensuring that they rotate at the same frequency.

When an alternating current is supplied to an electric car's stator, it generates a rotating magnetic field. This magnetic field interacts with the permanent magnets in the rotor, creating a synchronous rotation, and thus, produces torque to drive the vehicle's wheels. The synchronized rotation ensures optimal power conversion, maximizing efficiency and performance. The velocity of the vehicle is modulated by varying the frequency of the AC supplied to the motor. Advanced control systems in electric cars facilitate meticulous control over the motor’s operation, allowing for precise adjustments to speed and torque based on driving conditions, enhancing the vehicle’s adaptability and responsiveness.

Synchronous permanent magnet motors are renowned for their high-power density and efficiency, making them an optimal choice for electric cars where space and energy conservation are crucial. The utilization of permanent magnets eliminates the need for brushes, reducing wear and tear and maintenance needs, adding to the motor’s longevity and reliability. These motors are commonly used on the rear axles of Volkswagen Group and Tesla EVs, while the Hyundai Group uses this on both axles for most of its electric cars.

The synchronous permanent magnet motor harmoniously integrates compactness, efficiency, and precision control, propelling electric vehicles with optimal energy conversion and minimal loss. It stands as a testament to technological advancements in electric motor design, providing a balanced and sustainable propulsion solution in the evolving landscape of electric mobility, and reinforcing the pursuit of eco-friendly and high-performance transportation alternatives.

Electrically Excited Synchronous Motor: Efficiency and Longevity

The electrically excited synchronous motor, currently used in most of BMW's electric options, operates as a crucial propellant in electric vehicles. It harmonizes magnetic synchronization with electrical excitation to offer controlled and efficient driving experiences. This motor utilizes an external power source to produce a magnetic field in the rotor, distinguishing it from its permanent magnet counterpart.

The EESM receives alternating current to its stator, creating a rotating magnetic field. Direct current is concurrently supplied to the rotor to generate a magnetic field that aligns synchronously with the stator's rotating field. This synchronized interaction between the rotor and stator magnetic fields produces torque to propel the car. The vehicle's speed and torque are precisely controlled by adjusting the frequency and amplitude of the supplied AC, enabling precise manipulation of the motor's output to suit varying driving conditions. Advanced electronic controllers interpret the driver's inputs, modulating the motor's operations to ensure responsive and smooth driving dynamics.

Electrically excited synchronous motors are applauded for their flexibility and adaptability, allowing for adjustments to the magnetic field strength, and subsequently, motor characteristics, optimizing performance, and efficiency. These motors do well in scenarios that demand high torque and power, providing robust and reliable propulsion to electric vehicles and ensuring peak performance across diverse driving environments.

Electrically excited synchronous motors amalgamate synchronized magnetic interactions with precise electrical adjustments to provide optimized propulsion in electric vehicles. They embody adaptability and power, adapting their operational characteristics to the vehicle's demands to ensure optimal performance, and contribute to the advancement of efficient and sustainable electric vehicle technologies. The integration of these motors signifies a stride towards versatile and high-performance electric mobility solutions, catering to the evolving prerequisites of modern transportation.

Asynchronous Induction Motor: Robustness and Versatility

An asynchronous induction motor operates based on the principles laid down by Nikola Tesla. This motor type relies on alternating current and is distinguished by the absence of brushes and commutators, reducing maintenance requirements and enhancing longevity. The operation begins with the application of AC to the stator windings, creating a rotating magnetic field. This rotating field induces a current in the rotor due to electromagnetic induction, hence the induction motor description. As the rotor never reaches the synchronous speed of the stator's magnetic field, it is identified as an asynchronous function.

The induced current in the rotor generates its magnetic field in electric cars, interacting with the stator's field to produce torque, propelling the vehicle forward. The vehicular speed is controlled by varying the frequency of the AC supplied to the stator and manipulated through advanced electronic control systems, allowing precise control over the vehicle's motion. Manufacturers like the Volkswagen Group and Tesla use these motors for the front axles of their EVs.

Asynchronous induction motors are praised for their robustness and efficiency, suitable for varied driving conditions. They can generate substantial torque at low speeds, which is beneficial for starting and low-speed maneuvers, and maintain efficiency at high speeds. Their ability to operate under diverse load conditions with minimal wear makes them a prevalent choice for electric vehicles, as they combine performance with reliability. Asynchronous induction motors in electric cars utilize the principles of electromagnetic induction to convert electrical energy to mechanical energy efficiently, providing a balance of power, reliability, and operational resilience, which is paramount in the dynamic environment of automotive applications. They continue to be a crucial component in the advancement of electric vehicle technology, contributing to the evolution of sustainable and efficient transportation solutions