



South African Model Aircraft Association

Postal address PO Box 7116, Bonaero Park, 1622, South Africa Fax 086-607-8733
Telephone: GM, Bob Skinner 083-283-1681. Administration: Linda Dold 083-612-7047
e-mail: admin@samaa.org.za and gm@samaa.org.za
www.samaa.org and www.samaa.co.za:89

To: All SAMAA members

Date: 1 April 2021.

Communiqué # 21

Dear SAMAA Member,

Greetings to all our members on this Easter weekend, we trust that you will have a wonderful time with family and friends.

SAMAA Insurance – Referring to the latest proposal received – Comments drafted and submitted for review. Follow up was done and we expect a reply within the next 10 days. Referring to the second offer – We have not received a second offer yet. We followed up and we expect the proposal within the next week, we have been asked to be patient and that all will be submitted in due time.

COVID-19 Update – RSA is in lockdown level 1 Revised for Easter weekend.

- Curfew from 00H00 to 04H00 in place.
- We may not transport alcohol over the Easter Weekend.
- Always wear your face masks.
- Social distancing.
- CV-19 Protocols must be followed.
- NOTE: Have your protocol file/Covid Management Plan on hand for possible review by authorities.

We are reminded of a possible third wave of infections, and the consequences that it might have; please be wise and sanitize; let's help to flatten the curve.

Events planned.

- IRF Float Fly-in
 - Date: 17-18 April
 - Organiser: Corne De Wagenaar
 - Contact: 082-335-3139
 - Venue: CAT Club at Bronkhorstspuit dam.
- LSA – RMAC Pilot/Judging Workshop.
 - Date: April 10 @ 08:00 – 17:00.
 - Venue: Rand Model Aeronautic Club
 - Contact: Justin Gomersall 084-465-1000
- MWMC Fly-in
 - Date: April 10 @ 08:00 – 16:00
 - Venue: Midwest Model Club (Potchefstroom)
 - Contact: Marnu Bothma 083-262-3719



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Committee (from March 2020)

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Curbing our Carbon footprint. – Latest info received from the Aero Club, regarding the Government Gazette “Carbon Offset Regulation No. 42873” published 30 Nov 2021, now brings into effect the compensation event that will offset the carbon footprint caused by use of hydrocarbon internal combustion motors for any sporting events in South Africa. As from 2021 a levy of R 275.00 will be added to your annual SAMAA membership fees. The funds raised will be used for research on various catalytic inserts, that could be used to lower carbon emissions on all two-stroke type motors.

The Old Faithfull Glow Plug

Glow plugs are an essential tool in making a nitro vehicle work. But, like many aspects of nitro vehicles, they are a mystery to most people that use them - how they work, why they work, and how to pick the right glow plug. Let's look at the essence of a glow plug, separate fact from fiction, and explain the science behind glow plugs.

Glow Plug, Noun

A device for each cylinder of an IC engine with a heating element to heat the incoming fuel and air so that combustion will take place more readily when the engine is cold. So, in simple terms, a glow plug provides ignition for the fuel/air mixture in an engine, somewhat like a spark plug does in a gasoline internal combustion engine.

How Does a Glow Plug Work?

Engines need three things to work: fuel, oxygen, and an ignition point. The glow plug provides that ignition by heating the element (which is the small coil of wire inside the plug). This is usually done with a 1.5v battery contained in a glow ignitor. Some of the more recent vehicles have on-board batteries that ignite the glow plugs as part of an electric starting system. Either way, once the element is heated and the engine is started, no more power is needed to keep the element hot and provide constant ignition to the engine.

How the element stays hot after the battery is removed all hinges on the fuel we use in glow engines and on the material the element is made of. The fuel contains methanol, which is a type of alcohol. The element is made of several different metals, which when alloyed together, make it strong enough to handle the heat and vibration. But one of the metals, platinum, is special. When the platinum in the element comes in contact with the methanol in the fuel, there is a catalytic reaction between the two. This heats the platinum while causing the methanol to ignite. This is the foundation upon which the entire nitro hobby is built.

What Determines the Ignition Point if the Element is Always Hot?

The catalytic reaction depends on two things to work: heat and pressure. The hotter the element is, the easier it will ignite. Similarly, the higher the pressure inside the combustion chamber, the easier things will ignite.

Glow Plug Temperature - Hot, Medium, or Cold?

Glow plug temperature is controlled by using different heat range plugs. There are many different heat ranges, but most fall in one of three categories: hot, medium, or cold. If you're not sure which kind to use, consult with the engine manufacturer to determine what



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they recommend for their engine. Using a hotter than normal glow plug will advance the ignition point, and using a colder than normal plug will retard the ignition point.

Combustion Chamber Pressure

There isn't much you can do to alter the pressure within the combustion chamber, as this is usually set by the manufacturer. You can add head shims to increase or decrease the size of the chamber, but this is something only experienced nitro users should attempt, as you can easily brick your engine if you make a mistake.

Glow Plugs and Nitro Fuel - What You Need to Know to Pick the Right Plug

There are very few glow plugs that are considered universal plugs (OS' #8 plug is an example). For the most part, the type of fuel you are running will impact the kind of glow plug you need to use. Another component in the nitro fuel is nitromethane. The Nitro Percentage of your fuel determines the ignition point as well; in other words, the more nitro you run, the more you advance the ignition point. Ideally, the ignition point will be when the engine is at top dead center (TDC). This will force the piston down and back up again for another stroke. But when you run higher nitro content and don't switch to a colder plug, you will advance the ignition point and result in less-than-optimum performance, since the piston is still on its compression stroke (the upward stroke) when the air/fuel mixture is ignited.

In general, **the higher the nitro percentage, the colder the plug should be. Conversely, the lower the nitro percentage, the hotter the plug should be.**

Summary

I hope this helps to dispel some of the myths surrounding glow plugs and why they work. There's no mystery here - just science. And picking the right glow plug for your boat, car, or airplane or helicopter shouldn't be hard. You just need to consult your manufacturer's manual for a recommended plug and fuel. Once you know that, you can adjust your nitro content and glow plug temperature as necessary. Now that you have the knowledge, next time you come in and ask for a plug, be specific about what you want. And your engine will thank you

Winner of Communiqué # 20 – Congratulation Mr Alex van Breda from Weskus Radio Flyers. You are the winner of comp # 20. We would also like to welcome Weskus to the comp 😊, please see overall standings below.

Club Name	Club winnings	Winnings
Durban Model Aircraft Club	1	R 100.00
Maritzburg Model Aircraft Club	1	R 200.00
Modderfontein Model Aero Club	1	R 200.00
Capricorn Model Vliegklub	3	R 600.00
Irene Radio Flyers	1	R 200.00
Weskus Radio Flyers	1	R 200.00

*Club Jackpot standing on R 1,000.00
most entries at year end

R 1 500.00



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This week's Word search – Find the word, mentioned below, circle it, and sent it back to us for review.

C	C	S	O	E	K	R	O	C	F	F	V	Z	B	O
O	Y	M	V	O	W	E	H	L	I	Q	D	Z	V	M
M	L	I	P	Z	Z	A	K	R	G	H	C	R	G	S
B	I	H	P	G	M	G	F	U	Y	L	G	B	T	E
U	N	S	J	B	C	N	L	Y	R	E	T	T	A	B
S	D	F	E	O	J	E	H	O	C	L	R	D	U	Y
T	E	R	L	J	A	V	P	W	W	T	Q	K	K	C
I	R	D	O	X	Z	A	I	N	G	N	V	Y	J	K
O	K	U	F	T	T	S	S	E	H	E	O	H	L	A
N	N	P	R	S	I	T	F	E	I	M	U	L	R	S
Q	W	M	S	Z	O	N	D	Z	R	E	E	C	B	J
T	X	V	C	H	Q	Q	G	A	J	L	E	A	B	M
E	C	N	A	V	D	A	K	I	E	E	W	I	T	E
C	T	T	Y	G	V	H	Y	P	E	H	I	Z	Y	N
Y	K	N	N	I	C	A	T	A	L	Y	T	I	C	W

Please submit your answer to admin@samaa.org.za with your name and SAMAA number before 12:00PM 9 April 2021 to stand a chance to win **R 200.00** with the compliments of our new sponsor, **Brain Worx**. Good Luck and enjoy.

Advance	Battery	Catalytic
Chamber	Cold	Combustion
Cylinder	Element	Glow
Head	Hot	Ignitor
Shims		

We hope that you've enjoyed this edition, have a blessed Easter weekend and remember "Your Faith might not remove the pain, but if WILL get you through it".

Best regards
The SAMAA Management Committee

Thank you to BRAINWORX for your continued sponsorship this week again!!

- With **aeromura** get a bird's eye view of the current flying conditions and real-time weather and forecasting at all your local flying locations and clubs
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- **aeromura** contains over 200 flying locations and clubs in South Africa, and more than 12000 worldwide – handy if you travel and would like to know where you can fly at your destination



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- With **aeromura** you can update a flying location's data for the whole community's benefit in real-time, which is seamlessly audited behind the scenes by Brainworx support staff
- Since launch in October 2020, more than 6000 RC pilots are already using **aeromura**, with 1 in 5 South African pilots now using it on a daily-basis
- It has been arranged that all South African pilots have been given a free premium subscription valid until end April 2021, to help you try the app before committing to it – subscriptions are cheap though at \$ 2 USD per month, or at the discounted rate of \$ 15 per year – and you can subscribe only for the months in which you actually fly

Perhaps try it out?

You can read more about the **aeromura** app by following this link : <http://www.aeromura.net/>

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<https://apps.apple.com/us/app/id1526771501>



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