



*Alfa Romeo*

*Klub van Pretoria*

*Club of Pretoria*

*ARCOP*

*Veloce*

Nuusbrief / Newsletter  
2024/07



***Alfa Romeo ..... (1961 Giulietta) Mooi Gely mooi .....  
selfs in 'n landelike omgewing!***

## Komitee/Committee 2024

**Voorsitter:**

Frank Boontjes 082 9686227  
[frankboontjes@gmail.com](mailto:frankboontjes@gmail.com)

**Tesourier**

Nielen Burger 083 3003409  
[staalburger80@gmail.com](mailto:staalburger80@gmail.com)

**Regalia**

Frank Boontjes 082 9686227  
[frankboontjes@gmail.com](mailto:frankboontjes@gmail.com)

**Ledesake:**

Hendri du Plessis 083 6332444  
[hendri@qpsbrokering.co.za](mailto:hendri@qpsbrokering.co.za)

**Byeenkomste:**

Ewan Botha 083 2984480  
[bothaewan1@gmail.com](mailto:bothaewan1@gmail.com)

**Addisionele lid:**

Gerhard van der Merwe 083 7214130  
[gerhard@turbonutter.co.za](mailto:gerhard@turbonutter.co.za)

**Nuusbrief:**

'Alet Erasmus 0827889108  
[alet@kleinfontein.net](mailto:alet@kleinfontein.net)

**Webmeester:**

Ryan Young [helpdesk@firehouse.co.za](mailto:helpdesk@firehouse.co.za)

**ARCOP Bank besonderhede:**

**CAPITEC** Savings Rek nr  
1355340223

Inhoud	/	Contents
Voorsitter		3
Redakteur		4
Byeenkomste		6
Noggin		11
ARCOP Sop en Sjerrie		13
Ons lede en hul Alfa's		16
Giulietta 70 – Arese, Milan (2)		20
'n Vriend se AR GTV		21
Ons onthou ... Clarence!		22
Why direct injection....?		23
Lag - 'n – Slag		25

### VERGADERINGS / MEETINGS

Die Klub vergader **elke DERDE Donderdag van die maand**, om 19:00 vir 19:30 by, Keunigstraat 180, Silverton, Pretoria. The Club meets **every THIRD Thursday of the month**, at 19:00 for 19:30 at 180 Keunig Street, Silverton, Pretoria.

### VRYWARING / DISCLAIMER

Die opinies wat in hierdie nuusbrief verskyn is nie noodwendig die van die klub nie. Die klub aanvaar geen verantwoordelikheid vir die korrektheid van tegniese data of prosedures wat gepubliseer word nie.

The opinions expressed in this newsletter are not necessarily those of the club. The club accepts no responsibility for correctness of technical data/procedures which may be published.

## **ARCOP Voorsitter se storie .....**



Frank Boontjes

Goeie dag Arcop lede

Ons is nou voluit in die 2e helfte van die jaar en seker die winterste winter in 'n lang tyd. Of ek word oud, maar koud kry ek koud. Ons het 'n lekker gesellige sop en sherrie gehad en dankie aan almal wat sop gemaak en gebring het. Ons bachelors waardeer julle verskriklik 🍷🍷 Dit was 'n gesellige aandjie.

*Ek wil net weereens ons lede vra om betrokke te raak met ons baandag voorbereiding en hulp van almal sal baie waardeer word.*

Ons volgende byeenkoms na die noggin is Cars in the Park en ek hoop om baie Arcop lede daar te sien en dan baandag 1 week later. Ek hoop om baie gesigte te sien by die noggin en lekker saam te kuier.

Ons het die maand weer 'n artikel oor een van ons lede met 'n paar pragtige fotos by. Mooi loop en sien julle dan eersdaags.

**I**



*Alfa Romeo*



**Uit die Redakteur se pen .....**



Ons is in die helfte van die jaar! Augustus gaan 'n besige maand wees met Cars in the Park en uiteindelik weer ons eie Baandag by Zwartkops renbaan!

Einde Junie het ons weer 'n gesellige Sop en Sjerrie geleentheid gehad! Ons nuwe lid, Paul Schoeman, was al die tyd ook saam met sy gade Dalene, in Arese, Milan vir die Giulietta se 70 jarige vieringe. (bl 20) Frank het vir Neville nader getrek om meer van sy pragtige versameling Alfa's te vertel. Baie dankie Neville! Dan is daar ook 'n kort terugblik op een van ons vorige wegnaweke na Clarence ..... 'n Lusmaker vir hierdie jaar se wegnaweek?!

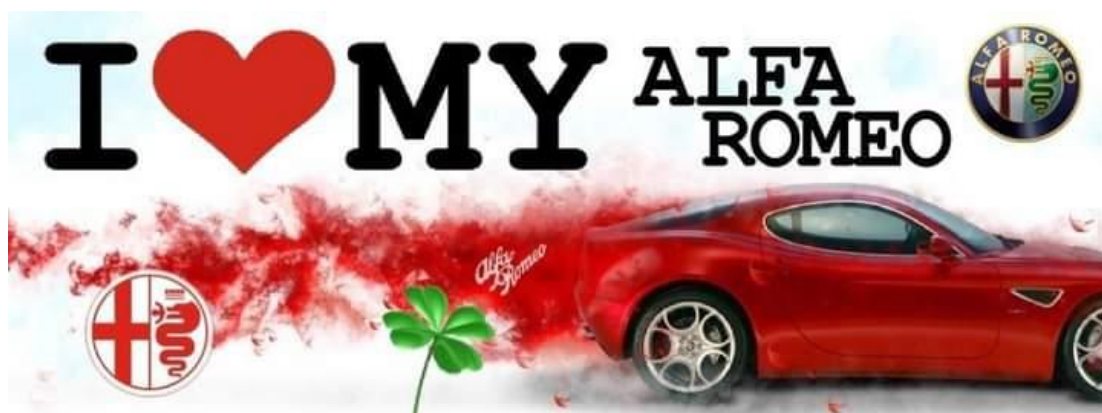
Dankie aan Corrie vir hierdie maand se tegniese artikel en spesiaal ook vir die moeite wat hy doen om elke maand die nuusbrieff by jou uit te kry! **Maak dus asseblief seker dat hy jou regte e-pos adres het. (corriedewilde5355@gmail.com)**

Hier is ook inligting oor die **ARCOP Baandag .....** (Bestuurders R500 en passasiers R100 - bl 5) en die naweek vooraf, **4 Augustus, Cars in the Park! (bl 10)**

Lekker lees aan die nuusbrieff ..... en vir die wat nie wil lees nie .... foto's kyk! 😊

Alfa Romeo ..... gister, vandag .....vir altyd!

*'Alet Erasmus*



# ARCOP BAANDAG 2024



## **ARCOP TRACK DAY, together with Stelantis and Super Motor Group – IMPORTANT POINTS TO NOTE**

The trackday to be held at Zwartkops promises to be great fun! The following points will assist to make the day run smoothly and avoid frustration.

### **WHAT TO BRING?**

You will need a crash helmet, long sleeve shirt, long pants and closed, non-slip shoes. Bring along some cash for regalia and something to eat at the canteen.

### **WHAT ABOUT MY CAR?**

Your car will be scrutineered before you will be allowed on track. The following have to comply, in order for your car to be allowed on track:

- Your car must be road worthy, therefore it has to have a legal seat belt, road tires in good condition, windscreen without chips or cracks and no fluid leaks.
- Your car battery has to be securely fastened.
- Your fuel tank has to be securely fastened.
- No loose body parts to be on the car.
- Brakes have to be in good condition and the brake pedal should be firm.
- Exhaust should not leak.

In order to enjoy your drive on the track even more, check the following before you go on track:

- Tire pressure should ideally be slightly higher than standard. This will help prevent tire deformation during cornering. For tires with standard pressure of 2.2 bar, increasing the pressure to 2.5 Bar should suffice. Do NOT over-inflate tires, as they may burst on track.
- Check water, oil and brake fluid levels and ensure all levels are topped up to the MAX mark.
- Ensure that there are NO loose items in the car or boot. Loose items shift and may cause damage.
- A good set of spark plugs can make a difference in performance.

### **COSTS:**

- Drivers = R 500pp
- Passengers = R 100pp

Registration on the day is open between 09H00 and 11H00.

*Tot dusver sê ons ook baie dankie aan die volgende borge:*

*Turbonutters – Gerhard vd Merwe*

*Ewan Botha*

*Frank Boontjes (Dunlop bande)*

*Gavin Grunder*

Meer inligting sal by die komende noggins deurgegee word.

### **ARCOP Byeenkoms / Events vir 2024**

Datum	Byeenkoms		Plek
18/07/2024	Noggin		Klubhuis
04/08/2024	Cars in the Park		Zwartkops
11/08/2024	Baandag		Zwartkops
15/08/2024	Noggin		Klubhuis
19/09/2024	Noggin		Klubhuis
25-27/10/2024	Wegnaweek		
24/11/2024	Paul Jungnickel Charity Run		
08/12/2024	Jaareind funksie		



### **PAUL JUNGnickel TEHUIS**

Klere, skryfbehoeftes, toiletware, nie-bederfbare kos, medisyne soos pleisters, verbande, kombuis skoonmaakmiddels ens ens. Bring asb saam na elke NOGGIN of tussendeur kan dit by Turbonutters afgelewer word.

## ***Aan stuur van sake .....***

***Alhoewel daar verskillende portefeuljes is, word daar altyd as 'n span saamgewerk vir die uitbou van ons Alfa Romeo handelsmerk! Komiteede is klubede ..... Deel van die familie.***

**Tesourier: Nielen Burger**

### ***Ledegeld vir 2024***

R500-00

**NB Elke lid moet elke jaar die registrasie sowel as die vrywarings (indemnity) vorm voltooi asseblief.**

***Die registrasievorm gaan saam met die ledegeld betaling, maak dus seker dat beide gedoen is.***

***Wanneer jy betaal en geregistreer het, ontvang jy jou lidmaatskapkaartjie.***

**Dit is belangrik om elke jaar heraansluiting te betaal om sodoende ook te kan kwalifiseer vir jou 10jr, 20jr en 25jr lidmaatskapbaadjie. Indien jy 'n jaar van registrasie oorslaan, moet jy weer van vooraf begin jare "bymekaar maak" om te kwalifiseer daarvoor.**

**ARCOP's banking details**

**Membership fees for 2024 – R500** 🍀

**ARCOP  
Capitec Savings  
1355340223  
Branch :470010**

### **ARCOP LEDE PUNTE TELLING**

**lets meer oor die puntetoekenning. Indien jy 'n foto tydens 'n noggin of byeenkoms neem en dit instuur, kan jy 2 (twee) punte verdien!**

**Wanneer jy Noggin bywoon, 3 punte! Vir die bywoon van 'n Event, 4 punte!**

Bywoon van noggin	3
Bywoon van byeenkoms (event)	4
Deelname aan byeenkoms bv baandag, gokart, spit&polish	5
Self geskryfde artikel	3
Reeds gepubliseerde artikel, m.a.w. copy&paste	1
Foto vir nuusbrief	2
Werf van 'n nuwe lid (wat aansluit)	5

Elke maand word die punte opgetel en aan die einde van November word daar met behulp van die jaar se puntetelling, die trofee vir Klublid van die Jaar asook Komiteelid van die Jaar uitgelooft.

Gevolgtlik kan jy ook elke maand by die Noggin die puntelys bestudeer wat Hendri (ledesake) op datum hou.

## WISSELTROFEES



Daar is vier wisseltrofees wat maandeliks na een of meer klublede toe gaan.

1. Aansporingstrofee
2. Puntetrofee – Word volgens punte verdien tot op datum bepaal. Punte toegeken volgens bostaande tabel (bywoning van byeenkomste, noggin ens)
3. Trofee vir persoon wat iets besonder vir die Alfa Romeo handelsmerk en/of klub doen.
4. Booby trofee – vir klublid wat iets ongewoon of snaaks oorgekom het.



## *Lief en Leed*

### Verjaarsdae en herdenkings

JULIE 2024

Lede:

22 Koos Steenkamp

24 Neville Forssman

Gade:

4 Charlene Steenkamp

7 Carina Grunder

10 Mariaan Booysen

Herdenkings

7 Neville en Charleen Forssman

Ons dink in besonder aan **Jacques Labuschagne** wat die 26 Junie vir 'n rugoperasie gaan. Jacques ons wens jou spoedige en volkome herstel toe.

**Laat weet asb indien jy kennis dra van klublid en/of sy/haar gade wat ongesteld is of wanneer jy goeie nuus het om te deel.**



Alfa's by die Eden Classic Car Show in Sedgfield (23/06/2024).

- Nols Pienaar

## P.O.M.C. BIED AAN.....



PRETORIA OLD MOTOR CLUB  
**CARS in the PARK**

**SAVE THE DATE**

POMCCITP.CO.ZA

**AUGUST 4, 2024**  
**ZWARTKOPS RACEWAY**

**POMC Cars in the Park**

Please take note of the correct times for entry on 4 August 2024 at [Zwartkops Raceway](#) for [POMC Cars in the Park](#). Times differ for vendors, exhibitor cars and spectators 🏁

**Gates will open  
at 5.30 for  
VENDORS**

**Cars in the Park**



Gates will be open  
between  
6.00 and 8.00 for  
exhibitor-vehicles

Gates will open  
at 8.30 for  
SPECTATORS



PRETORIA OUMOTORKLUB  
**CARS in the PARK**

**ZWARTKOPS**  
INTERNATIONAL WORLD OF MOTORING

**4 Augustus 2024**

Hekke open tussen 06:00 - 8:30 vir voertuig-uitstallers  
Twee persone per voertuig GRATIS toegang!

Hekke open 8:30 vir TOESKOUERS  
TOEGANG PER PERSOON:  
\*\*Aanlyn by iTicket R120  
\*\*By die hek R140  
\*\*Kinders onder 12 GRATIS

OR KLUB • OLD MOTOR  
ZWARTKOPS  
FM

Skermshoot met inligting vir toeskouers. Pretoria FM gaan ook daar wees.

## *Noggin 20 Junie 2024*

Soos gebruiklik is die ARCOP noggin gehou die derde Donderdag van die maand. Ons het egter so lekker gesels, dat niemand foto's van die noggin geneem het behalwe die foto's van die wisseltrofees wat oorhandig is nie. Maar ..... dit was lekker! Die ARCOP familie het gekuier en solank begin lippe aflek vir die jaarlikse Sop en Sjerrie wat die laaste Saterdag van Junie gaan plaasvind!

Intussen het ons gesmul aan Hendri se heerlike pastagereg! Baie dankie daarvoor!



Ewan Botha ontvang die aansporings trofee met die aankoop van sy geel Alfa Romeo Mito!



Heinz Katzke ontvang die Booby trofee ..... Hy het die vorige wisseltrofee by die huis vergeet!



Punte trofee gaan hierdie maand na Corrie de Wilde!

Ons het ook 'n nuwe (ou) lid verwelkom! Paul Schoeman was jare gelede vir 'n tyd lid van ARCOP in Dolf vd Walt se tyd. Deur sy suster het ek vir Paul leer "ken" en toe hulle weer gevestig is in Pretoria, hom genooi om weer aan te sluit by die ARCOP-familie.



Een van Paul se Alfa's. (Volgende keer sal ek hom in die dag afneem, sodat hy tot sy reg kan kom!) Paul het so vinnig vir ons vertel van sy versameling Alfa Romeo's. Baie welkom aan Paul en Dalene!

## ***ARCOP ..... Sop en Sjerrie 2024!***

Saterdag 29 Junie 2024, vanaf 16:00, het ARCOP sy jaarlikse Sop en Sjerrie geselligheid gehou. 'n byeenkoms wat elke jaar na uitgesien word. Hendri se ertjiesop en asook 'n tamatiesop, Henriëtte se groentesop en die uwe se botterskorsiesop, was op die spyskaart. Die klub het brood en smeer voorsien en elkeen het sy eie drinkgoedjie saamgebring.



😊 ..... daar was ander voertuie ook behalwe die Alfa's! 😊



'n Aalwyn blom het kleur aan die broodtafel gegee.



Heerlike vars brood om saam met die sop te geniet!



Vnr ....Botterskorsie-, tamatie-, ertjie- en groentesop!



Daar is gekuier, terwyl bekers en bakkies sop soveel as wat jy kon eet geniet is!



Dit was 'n heerlike en gesellige byeenkoms!

Ons sien reeds uit na Sop en Sjerrie 2025!

Foto's: 'Alet Erasmus

## ***Ons lede en hul Alfa's .....***

- Frank Boontjes

### My Journey with Alfa Romeos by .....



Neville Forssman

Being a petrol head all my life, my journey started at a very young age. I grew up in a family who loved Alfas. My cousins (older than me) had Giulietta's, Spiders and 1750 GTV's. It was from then that I decided I had to own one sooner rather than later.

It was only around 1980 that I found myself in a position to buy a second hand Alfa. My heart was always set on the 2000 GTV but that was totally out of my reach. Second prize was to find a 1600 GT Junior De-Lux (I wanted a look alike 2000 GTV). I could not find one at the time but was guided to a "single headlight" 1600 GT Junior. After taking it for a test drive, I fell in love with it and bought it for R3 700.00. I enjoyed this car for about 4 years but with children coming along and I had a company car, I decided it was time for me to sell her and sold her for R4 200.00 (how cheap that seems now).

I wasn't destined to own an Alfa for many years, but the passion never went away.

In 2005 I started looking for a good Alfa and found a 1985, 116 series, 2000 GTV. I then joined the West Rand Alfa Club and met my good friend John Rudman (and many other good people).

It was in 2009 that I got to hear of a 2000 Spider (series 2) RHD that was up for sale. I was adamant that it had to be a series 2 RHD. When Charlene and I got to the seller's house, I spotted a 1600 GT Junior De-Lux. Well, I was beside myself with excitement. We were told of an Alfa 145 that was also for sale and because the seller was emigrating to New Zealand, he offered a package deal for all three.



I was only really interested in the Spider and the GT Junior so I suggested that Charlene use the 145 as her daily drive. It was at this point that Charlene fell in love with Alfa Romeo.

Enter “die Blou Kar”.



An uncle of mine owned a 1965 Alfa Giulia Sprint GT for a long time having used it as his daily drive for about 10 years. As she was stored and not driven for some time, it was decided that I should take her over, but she needed a lot of T.L.C. In 2013 a full “bare metal” restoration was done. John Rudman undertook the restoration and Basie Theron of Algardine Panelbeaters (himself an Alfa collector and an absolute craftsman), did the body work.

The restoration of the Stepnose was completed around July 2014. With the ARCSA Concourse coming up, we were persuaded by our friend, Dawn Manelis, to enter. She said “we owed it” to John Rudman (also an ARCSA member) to enter the car and show off his work. So, we entered D’Etat and went on to win it. Everyone connected with the restoration was there and very delighted with the win. We also entered her into the Concours SA at Steyn City where the number of cars entered were 85. Concours SA is for all makes of cars. We were delighted when we won our class and got into the top 10.

Collectors started contacting me to find out who did the body work. I gave them Basie’s contact details and he was inundated with requests to do restorations. Now, hyped up with our success, we decided the 1600 GT Junior had to be restored. Because of our success with “die Blou Kar” (Basie christened her with this name), I was always first in the queue with him and so the restoration was started. The job took about 2 years and was well worth it! She went on to collect many awards, it’s first award was at ARCOP’s spit & polish, in class and best of day. When we were made an offer we could not refuse, we sold the car to another Alfa enthusiast. I really missed the car though and when we heard that Adrian McCaw was selling his GT Junior, we decided to replace ours. This car was restored some years ago and we have not done anything to it.

Our enthusiasm with restoring the old Alfas prompted our friend, Russell, to suggest that we buy a 1960 Giulietta Sprint from Peter Manelis. It was fairly complete but needed quite a lot

of little things. We again asked John to do the restoration and I sourced the missing parts and rubbers etc. Russell and I went to Padua in Italy and bought quite a few things we needed in Padua. Again, Basie did the body work. The restoration took 2 years and we were so happy with the outcome. It was entered into the 2019 Concours SA at Steyn City and we got third best of day.

### 1960 Giulietta Sprint



Again, Russell suggested that we buy another car from Peter, a 1958 Alfa Touring Spider, but this time it was not complete. It had been used as a donor car and was stripped.

## 1958 Alfa Touring Spider 2000

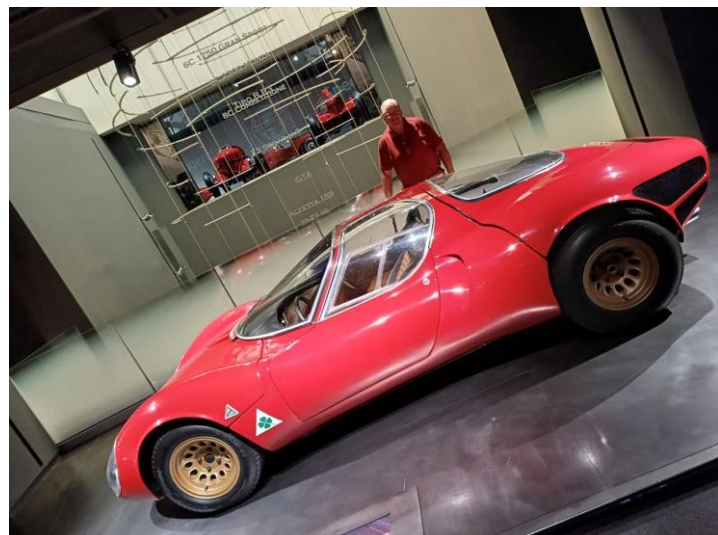


The body work was also very dodgy but we decided to take on the project. This car was imported from America where it was in the Arizona desert for many years. John then decided that he was not going to do the restoration as he was getting older and bending up and down was taking its toll. We also heard through the grapevine that Basie was not interested in doing the body work. We did all the cleaning, took it for chroming, sourced the parts and did a lot of the work ourselves. Again, we went to Padua to buy the missing parts. It's amazing to see what you can get in Padua. The initial body work was done by a master craftsman, Tony. Final prep and paint was done by Goldstar in Johannesburg. The restoration also took 2 years to completion and we were over the moon with the result. It was then that we decided to enter it into Concours SA again in 2023. It was a showstopper, and we won our class but unfortunately, we never got Best of Show as we did not have the Owner's manual and service books. We were asked to get them and enter again this year.

The car that we have not totally restored is our 1975 2000 Spider. It is the car that is used the most and twice we have been to Cape Town in the car to take part in the run from Cape Town to George. It's a 5 day event, arranged by the Cape guys, and we drive all the beautiful roads and stay in nice places. Our love for Alfas has only strengthened in the years we have had them and the wonderful people we have met on the way have become our friends. **A journey we are so happy we took.**

## Suid Afrika ook verteenwoordig oorsee (2)

Paul Schoeman (en sy gade Dalene) wat in Junie by ARCOP aangesluit het, was by die spesiale geleentheid in Arese, Milan op 1 Junie 2024!



Paul hier afgeneem by ARCOP se embleem in die Alfa Romeo Museum in Arese, Milaan.

## **'n Vriend kom wys sy Alfa Romeo GTV!**

- 'Alet Erasmus

Reeds vroeër in die jaar kontak Johan Botha my vanuit die Oostelike Provinsie om meer uit te vind oor 'n Alfa waarin hy belangstel. Ek verwys hom na Glenda Walters van die EPARC vir hulp en raad om die regte keuse te maak. Later in die jaar laat weet hy, hy dink hy het sy droom Alfa gekry! Weer gaan 'n tyd verby en Woensdag 19 Junie bel Johan my en vra of ek tuis is, want hy wil sy Alfa vir my kom wys!!! 'n Pragtige rooi 2001 GTV!! Wat 'n voorreg om hom eerste te sien!!! Pragtig opgepas!



Johan en sy gesin het eers 'n paar draaie gery voordat hulle terug is kaapprovinsie toe en die GTV het gery soos 'n droom!

Dankie dat jy jou droommotor vir ons kom wys het Johan! Mag jy wonderlike kilometers met hom ry!

# ***ARCOP se Clarence wegbreek 2015 .....***

- Frank Boontjes



Net so 'n paar foto's van ons Clarence wegnaweek! Sal dit nie lekker wees om weer so klompie Alfisti bymekaar te kan kry om net weer bietjie sorgeloos te gaan uitspan nie?!



....en het ons Alfa's nie die koppe laat draai nie! Sien al klaar uit na Wegnaweek 2024!!

## **Waarom het Direkte Inspuiting tot stand gekom? Wat is die voordele daarvan?**



Corrie de Wilde

Om meer krag te ontwikkel van 'n binnebrand enjin het die druk verhouding al hoër gegaan. Dit het detonasie (erger 'pre-ignition') veroorsaak wat suiers, suierstange en enjin blokke gebreek het.

Omdat daar in 'n DI enjin net lug sonder brandstof deur die suier saam geps word, kan die lug nie voor die vonkprop se werking aan die brand raak nie. Want die brandstof word op die laaste oomblik, voor ontsteking deur die vonkprop, in die silinderkop ingespuut. Nou kan hoër druk verhoudings gebruik word indien die suiers en stange sterk genoeg is.

Verder het die petrolenjin veld verloor teenoor die diesel enjin agv n hoer brandstof gebruik. Maar met die DI petrolenjins is agter gekom dat die vlam in die ontstekingskamer warmer rondom die inspuiter brand en minder warm na die silinder blok ('sleeve') soos die suurstof uit die saam geperste lug verbrand. Wanneer daar nou beter metale vir die uitlaat klep gebruik word kan 'n brandstof armer mengsel in die enjin gebruik word. So word die motors met DI enjins ongelooflik brandstof effektief. Veral die DI turbo enjins baad baie hierby.

Hierdie meer ekonomiese enjins het dan die verdere voordeel, dat met minder brandstof wat gebruik word, word daar minder CO<sub>2</sub> in die atmosfeer vry gelaat.

Maar die werklike rede vir hierdie artikel is die vraag hoekom ontwikkel die DI enjins meer krag as die enjins met die brandstof inspuiter in die inlaat poort. Daar was aanvanklik vermoed dat die enjin met die inspuiter in die inlaat poort behoort meer krag te maak, want daar is meer tyd vir die brandstof om in die lug opgeneem te word en by die suurstof te kom voor ontbranding. Maar die "Dyno's" het konstant die voordeel aan die DI enjins

gegee. Sels by twee engines met dieselfde druk verhoudings kon die “ou” engin met die inspuiter in die inlaat poort, nie die pyp rook nie.

Ek heg ‘n Amerikaanse artikel aan wat hierdie tendens verklaar:

## **Brian Tooley Racing Explains Why Direct Injection Makes More Power**

By [GREG ACOSTA](#)

<https://www.enginelabs.com/news/brian-tooley-racing-explains-why-direct-injection-makes-more-power/>

Ever since direct injection has come on the scene with the Gen-V family of Chevrolet small-block V8s, we’ve seen numbers from mild engine combinations rivaling those of full-on race engines of generations past. If you know Brian Tooley of [Brian Tooley Racing](#) (BTR), you know that a mystery like that isn’t going to go unsolved, let alone unexplored, for long.

He and his team had their hypotheses on why the direct-injected engines seemed to make so much more power than similar port-injected combos, but like anyone worth their salt, they wanted to test their theories on the dyno to either prove or disprove them. While the easy conclusion is that direct injection allows for a higher compression ratio and thereby larger numbers, what if both injection methods were tried on the same engine? That should level the playing field.

Under those conditions, Tooley’s hypothesis was that the latent heat of evaporation provided by a port-injected combination would make more power on the dyno than the direct-injected setup, much in a similar way as [carburetor proponents say carburetors will outperform fuel-injected combinations on the dyno](#). However, his hypothesis was destroyed in an A-B-A dyno test, showing the port-injected configuration losing 75 horsepower over the direct-injected setup.

Instead of dwelling on having the wrong hypothesis, he immediately fell back to the scientific method and looked at the data. After poring over the information from the tests, Tooley found a correlation between the airflow and power results, and went back to the dyno to test his new hypothesis.



This time, the data came back to support his hypothesis that the fuel in the intake tract was displacing air (it does have mass, after all) by removing the fuel from the airflow into the port, there would be additional room for air. To further test his theory, they made several pulls with 50 percent of the fuel provided by port injection and 50 percent provided by direct injection. The result confirmed the theory on two fronts.



**Here you can see that the second round of dyno tests supported Tooley’s new hypothesis regarding direct vs. port injection.**

First, the power result was right in the middle of the 100-percent port-injected tests, and 100-percent direct-injected tests. Secondly, the airflow numbers into the cylinder were right at half the difference between the two configurations’ airflow numbers, seemingly solving the mystery. The primary reason direct-injected engines make more power than an equal engine with port injection, is that the fuel is displacing air when entering the cylinder.

The obvious next question is, does that change how you design an intake port, since the flow behavior of just air is likely different than that of air with fuel suspended in it. However, that question will have to be answered in the future.

Article Sources

[Brian Tooley Racing](http://www.briantooleyracing.com)

<https://www.briantooleyracing.com>

# Lag - 'n - Slag

Beste Nederlandse grappie

- "Goedemorgen, is dit de autogarage?"
- "Ja mevrouw, zegt u het maar."
- "Op mijn dashboard, brand het lampje van het kakkende mannetje, is dat erg?"
- "Kunt u mij alstublieft een foto sturen?"



- "Mevrouw, dat lampje geeft aan, dat de buitentemperatuur, vier graden onder nul is."

Ingestuur deur Frank Boontjes



It's been an hour and I don't dare move my car

## ADVERTENSJES

*Ons Klubhuis is nou by .....*

### *TurboNutters cc.*

180 Keunigstraat, Silverton, Pretoria

Tel : 012 325 8739 / 012 326 4713

Sel : 083 721 4130 Gerhard

Epos : [gerhard@turbonutters.co.za](mailto:gerhard@turbonutters.co.za)

*Trustworthy Repairs on all Motor Vehicles*



#### Advertensiekoste

<i>1/8 blad</i>	<i>R 50-00</i>
<i>1/4 blad</i>	<i>R 80-00</i>
<i>1/2 blad</i>	<i>R100-00</i>
<i>Volblad</i>	<i>R200-00</i>