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- Learner's licence
- The yard and road test
- What does the law say?
- Choosing a driving school

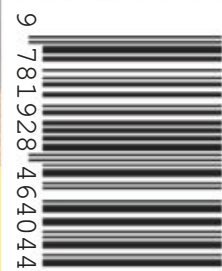


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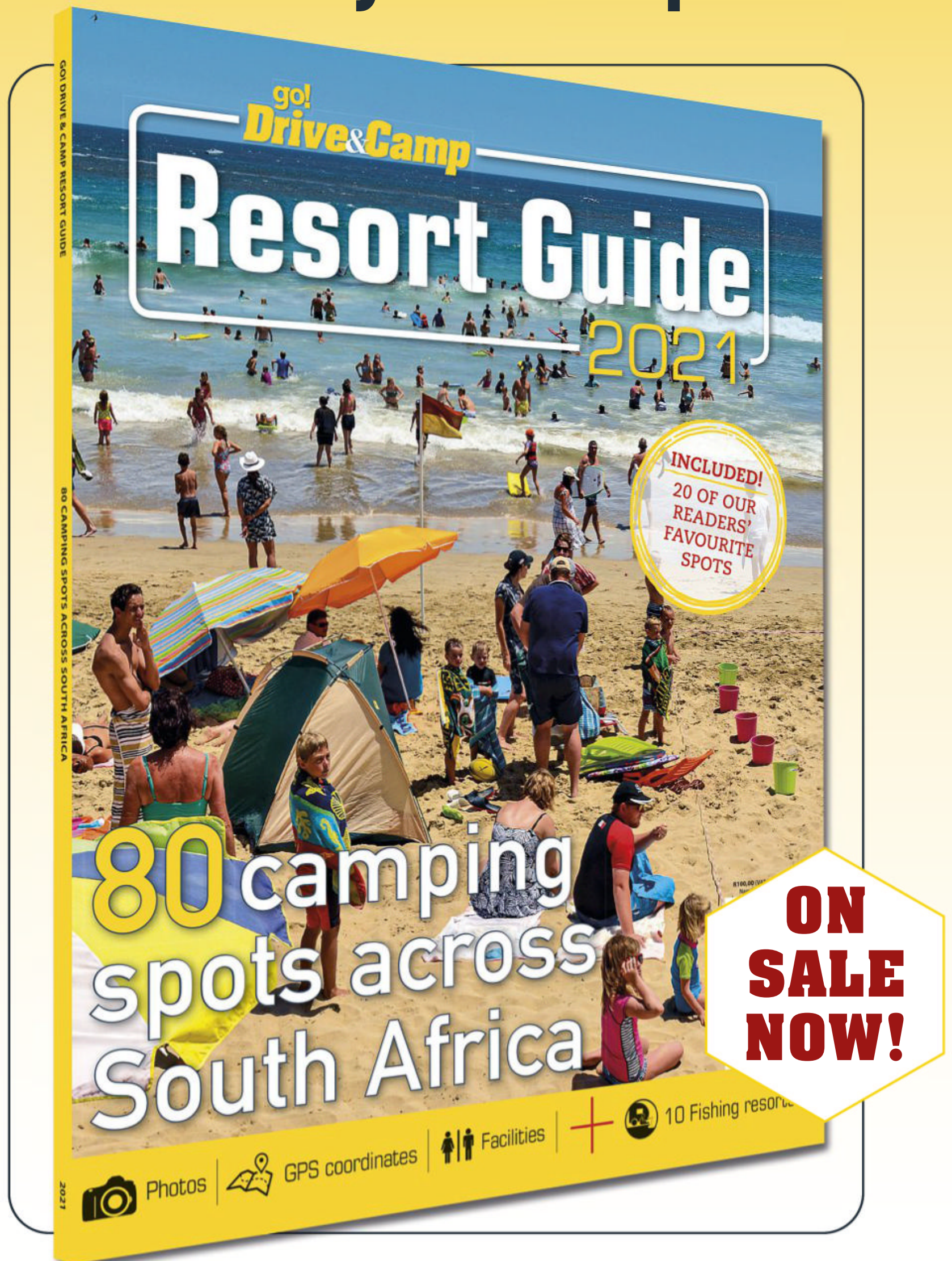
TIPS



Towing 101 • Tare, GVM and GCM • Taking care of your tyres
• How to load your caravan • The safest speed for towing



Where will you camp next?



Get your towing licence



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Licence, please



I am on the wrong side of 40 and got my driver's licence more than 20 years ago after taking local traffic cop Barber Botha for a 20-minute drive through the streets of Parys in the Free State. Beforehand, I'd passed the yard test quite effortlessly in my silver Mazda 323. It was honestly not that difficult to parallel park with the 'Silver Flame'. And from that day on, I was legally on the road with my code 8 driver's licence. And I could legally tow a caravan with it, too.

Shortly before the new millennium, the authorities changed to card driver's licences and new codes and I automatically got a code EB licence, which meant I could still legally tow. However, if you were born after 1980 and you did not have a caravan hitched when you obtained your driver's licence, you got issued with a code B, which means you are not allowed to tow anything heavier than 750 kg.

The problem is that most caravans and camping trailers on our roads are indeed heavier than 750 kg and this

leads to a situation where prospective campers who want to tow a caravan for their young family cannot do so because they will be on the wrong side of the law. This is a growing problem in the industry and something that manufacturers are equally concerned about. Over the years we have written a wide variety of articles on this very subject, and in this special edition we have updated and summarised the information.

We take you through the process of passing your learner's licence and your driver's test step by step, and then share a series of useful towing tips, such as how to load your caravan, how to prevent sway and what to do when it does, how to look after your tyres, discuss the safest towing speed and how to make sure you understand the difference between your caravan's tare and GVM.

This way you can stay safe on the road when you finally have that EB driver's licence in your wallet and hitch your Conqueror Commander (legally).

Safe travels!

Schalk

EDITOR

schalk.jonker@media24.com

go! Drive & Camp

Get your towing licence

EDITORIAL TEAM

EDITOR SCHALK JONKER schalk.jonker@media24.com

JOURNALISTS LEON BOTHA leon.botha@media24.com

CYRIL KLOPPER cyril.klopper@media24.com

KYLE KOCK kyle.kock@media24.com

DESIGNERS DOMINIC WIENAND dominic.wienand@media24.com

OWEN WILLOUGHBY owen.willoughby@media24.com

COPY EDITOR ERIKA BORNMAN

MULTIMEDIA MARCELLE VAN NIEKERK marcellevanniekerk@media24.com

CEO OF MEDIA24 ISHMET DAVIDSON

HEAD OF MEDIA24 PRINT MEDIA RIKI SWART

HEAD OF LIFESTYLE MINETTE FERREIRA

CMO MEDIA24 LIFESTYLE NERISA COETZEE

HEAD OF PROJECT MANAGEMENT RAJ LALBAHADUR

FINANCIAL MANAGER MELANIE LEEMAN

CIRCULATION MANAGER ARMAND KASSELMAN

armand.kasselman@onthedot.co.za

ADVERTISING SALES

DANIE NELL danie.nell@media24.com 082 859 0542

SHARLENE SMITH sharlene.smith@media24.com 083 583 1604

VERNETTE WESSELS VRautenb@media24.com 082 766 1705

COMMERCIAL MANAGER LISE VAN BREDA Lise.Coetsee@media24.com

MEDIA24 LIFESTYLE CREATE STUDIO

CREATIVE DIRECTOR MICHAEL DE BEER

COMMERCIAL MANAGING EDITOR GERDA ENGELBRECHT

HEAD OF EVENTS FRANCOIS MALAN

HEAD OF SPONSORSHIPS NIKKI RUTTIMANN nikkir@media24.com

MARKETING MANAGER ANDILE NKOSI Andile.Nkosi@media24.com

COPY EDITOR BRIGITTE BLANCKENBERG

PRODUCTION KERRY NASH

SHOP QUERIES AMINA ESSOP Amina.Essop@media24.com

CONTACT US

AMINA ESSOP Amina.Essop@media24.com

CAPE TOWN

POSTAL ADDRESS go! Drive & Camp, PO Box 740, Cape Town 8000

STREET ADDRESS 19th Floor, Media24 Centre,

40 Heerengracht Street, Cape Town 8001

JOHANNESBURG

POSTAL ADDRESS go! Drive & Camp, PO Box 785266, Sandton 2146

STREET ADDRESS 6 Kikuyu Street, Sunninghill 2191

SUBSCRIPTIONS, RENEWALS & INQUIRIES

087 353 1300 | +27 (0)21 065 0033 (international)

Fax – 086 296 6681 | WhatsApp – 087 353 1333

SMS "service" to 31069 | subs@media24.com



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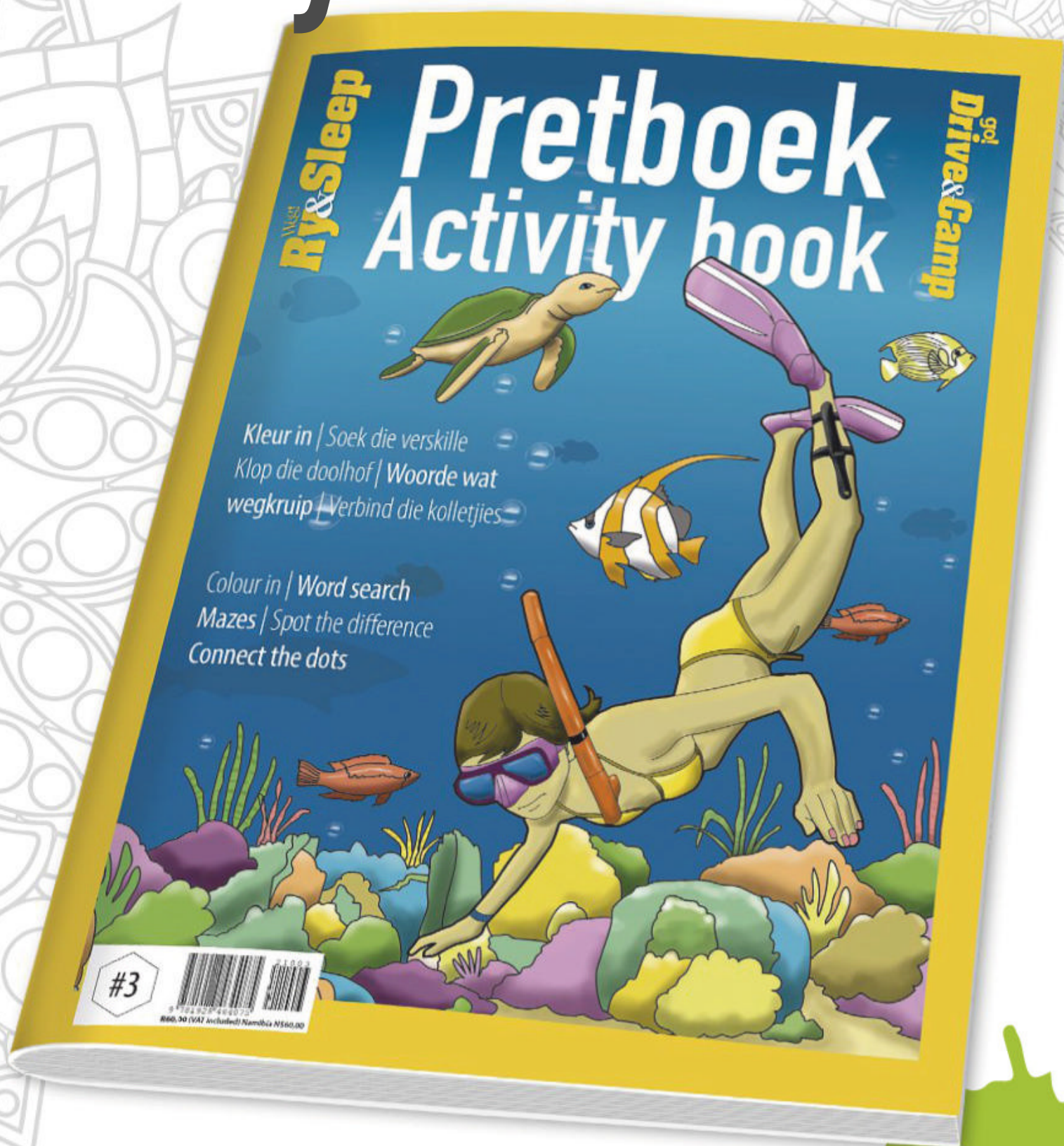


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Get the correct driver's licence!

There is quite a bit of confusion when it comes to towing licences for South African motorists. We take a closer look at the law and speak to experts to break it all down.

Your buddy Dave reckons you can tow a Sprite Splash with a Code 10 heavy vehicle driver's licence. The oke at the driving school says that if you have the new C1 driver's licence, Bob's your uncle. Then you run into Harry from the traffic office at Spar and he's pretty sure your C1 driver's licence should do the trick – he was told that some time in the future, you will in fact be able to tow with it. It's not exactly what you wanted to

hear, and now you're in two minds again. You decide to go with what Harry and the guy from the driving school said. After all, you know you're a good driver and you don't want to start from scratch again, get a learner's driver's licence or do the towing test...

FIRST, THE BAD NEWS

You're misinformed and bound for trouble. At some stage, a law enforcer is going to

nail you, because you're not allowed to tow your Splash with a C1 driver's licence – finish and *klaar*.

The towing regulations in the Road Traffic Act (no. 93 of 1996) states this clearly, even if certain people try to tell you differently.

And it's not just a fine that you need to worry about – your insurance won't pay if you're involved in an accident and don't have the correct driver's licence for towing.



WHAT'S THE PROBLEM?

Road transport consultant Alta Swanepoel of Alta Swanepoel & Associates in Pretoria says that the continuous debates, uncertainty and confusion is unnecessary.

You only need to comply with the regulations in the act, which is not that difficult to understand. She attributes the problems and confusion to stubbornness and says that people should let go of the idea of the old driver's licence and forget it entirely.

"The legislation is actually very clear. People are sometimes stubborn. They still talk about a Code 8 and Code 10, which ceased to exist 18 years ago. That adds to the confusion."

Alta also says that there are people who don't want to do the towing test and try to talk their way around it.

The Act is however clear. The fact is: if you don't have a driver's licence for towing, you'll have to accept that you need to do a K53 again. You need to write a learner's driver's licence test and go for a towing driver's licence test thereafter.

THE ANSWER LIES IN THE 'E'

A basic breakdown of the different driver's licence codes can be found on the back of your driver's licence card. The crux of caravan towing lies in the last three codes starting with an E: EB (light vehicle), EC1 (heavy vehicle) and EC (extra-heavy vehicle). These driver's licences are the only ones with which you can tow a trailer or caravan with a gross vehicle



THE BEGINING

“
People are sometimes stubborn. They still talk about a Code 8 and Code 10, which ceased to exist 18 years ago. That adds to the confusion

mass (GVM) of more than 750 kg.

Under the top group driver's licences at the back of your driver's licence card, you'll find the normal motor vehicle driver's licence (Code B) with which you are also allowed to tow, although nothing with a GVM of more than 750 kg. So you can tow a trailer or a small two-person caravan, as long as it states on the caravan's plate that it has a GVM of 750 kg or less.

Under the top group, there is also two heavy vehicle driver's licences: the C1 (or old Code 10) that some people wrongly view as a general towing licence, and the C driver's licence for extra-heavy vehicles. You are only allowed to tow a caravan with a GVM of 750 kg or lighter (and nothing heavier) with these two heavy vehicle driver's licences, just like the Code B for motor vehicles.

BUT WHY NOT?

Why aren't you allowed to tow your Sprite with the B-, C1- or C driver's licence, and only with Code EB, EC1 and EC?

Code B, C1 or C is for non-articulated or rigid vehicles that don't entail a horse and carriage. Even if you don't complete a towing test for rigid vehicles, you are allowed to tow a caravan or trailer with a GVM of 750 kg or less. Code EB, EC1 and EC driver's licences are specifically for articulated vehicles and bigger towing combination and requires a towing test. If you want to tow any caravan or trailer with a GVM of more than 750 kg, you have to do the towing test. If you obtained a Code 8 driver's licence before March 1998, you do however have a towing licence (EB), even if you never did a towing test.



MOTORHOMES AND BAKKIES

Authorities use three weight yardsticks for driver's and vehicle licences: the weight of the empty vehicle (tare); the gross vehicle mass (GVM); or the gross combination mass (GCM).

With motorhomes, they've given some leeway. Although these are built on the chassis of a panel van, or a goods vehicle, it is considered to be a normal vehicle and the directive for your driver's licence and vehicle





licence is its empty weight (tare). So you only need a normal driver's licence (B) for this type of vehicle.

If you're going to tow a Jimny or anything else with a GVM of more than 750 kg with it, the B driver's licence won't do – you'll have to get a licence for towing.

There's no leeway with bakkies. Even if your bakkie is your only driving or towing vehicle, it is still considered to be a freight

vehicle, not a normal motor vehicle.

As with a bus or truck, the weight yardstick for a bakkie is GVM. If you have a Ford F250 with a GVM of more than 3,5 tonnes, for instance, you need a Code C1 driver's licence to drive it and a EC1 to tow your caravan with it.

But that's not all: You also need a professional driver's permit, because this vehicle has a GVM of more than 3,5 tonnes.



go! Drive & Camp says
Get that Code E in your driver's licence – it's the only legal way for you to hitch your Sprite and tow it to Uvongo.



LEGALLY SPEAKING...

B



With this driver's licence, you can drive a vehicle or motorhome with a tare that doesn't exceed 3,5 tonnes; or a mini-bus, bus or freight vehicle with a GVM of 3,5 tonnes or lighter. You're only allowed to tow a trailer or caravan with a GVM of 750 kg or less.

C1



You're permitted to drive a motor vehicle with a tare less than 16 tonnes, or a minibus, bus or freight vehicle with a GVM less than 16 tonnes, but you're only permitted to tow a trailer weighing less than 750kg. With this, you automatically get a Code B licence.

C



This is the extra-heavy vehicle licence for rigid vehicles like trucks and busses with a GVM of more than 16 tonnes. With this licence, you're also only allowed to tow a trailer of 750 kg; and you also automatically obtain Code B and C1 driver's licences with it.

EB



You're permitted to drive a rigid vehicle with a GVM of up to 3,5 tonnes. You're also allowed to drive a car with a tare of up to 3,5 tonnes, or a minibus, bus or freight vehicle with a GVM of up to 3,5 tonnes, as well as tow a trailer or caravan with a GVM of more than 750 kg. With this licence, you also obtain a Code B driver's licence.

EC1



You're permitted to drive a rigid vehicle with a GCM less than 16 tonnes. You're also allowed to drive a car with a tare below 16 tonnes, or a minibus, bus or freight vehicle with a GVM less than 16 tonnes, and tow a caravan or trailer a GVM of more than 750 kg. You also obtain a Code B, C1 and EB driver's licence with it.

EC



The big shot of rigid vehicles with a GCM of more than 16 tonnes. With this licence you are also permitted to drive a bus or freight vehicle with a GVM of 16 tonnes and above and tow a caravan or trailer with a GVM of more than 750 kg. You also automatically qualify for a B, C1, C, EB and EC1 licence.



A driving lesson

When revisions were made to the road traffic act in 1998, the old numerical licence codes were switched to the letters that are in use today.

But there are some among us who want to legally tow our caravans to holiday destinations in and around the country. Here's how to do it the proper, legal way.

First of all, you're going to have to check your existing driver's licence code. If you don't know where this is, it's right in the middle of your card alongside the word "code".

If you're under the age of 40, the chances are high that when you passed it was for a Code B licence, which enables you to drive a light motor vehicle legally and tow a trailer with a gross vehicle mass (GVM) not exceeding 750 kg.

But most caravans have a GVM higher

than that, and an EB licence means that you are legally allowed to tow an articulated vehicle or a rigid vehicle and trailer up to a gross combination mass (GCM) of 3 500 kg, which would be the added-up maximum of most SUVs and bakkies available in our market with a fairly big caravan, too.

If your licence says EB, then you don't have to read any further, unless you want to send your spouse or child for the EB to help with towing duty in future. In that case, you've come to the right place.

If you're 30, like me, and have been casually towing your dad's old Penta with your KB down to the coast for Christmas, you're probably on the wrong side of the law, because your driving test did not include a trailer hitched to the rear of the vehicle you were driving.

HIT THE BOOKS

The bad news is that if you're already a B licence holder, you're going to have to check in at your nearest Traffic Department



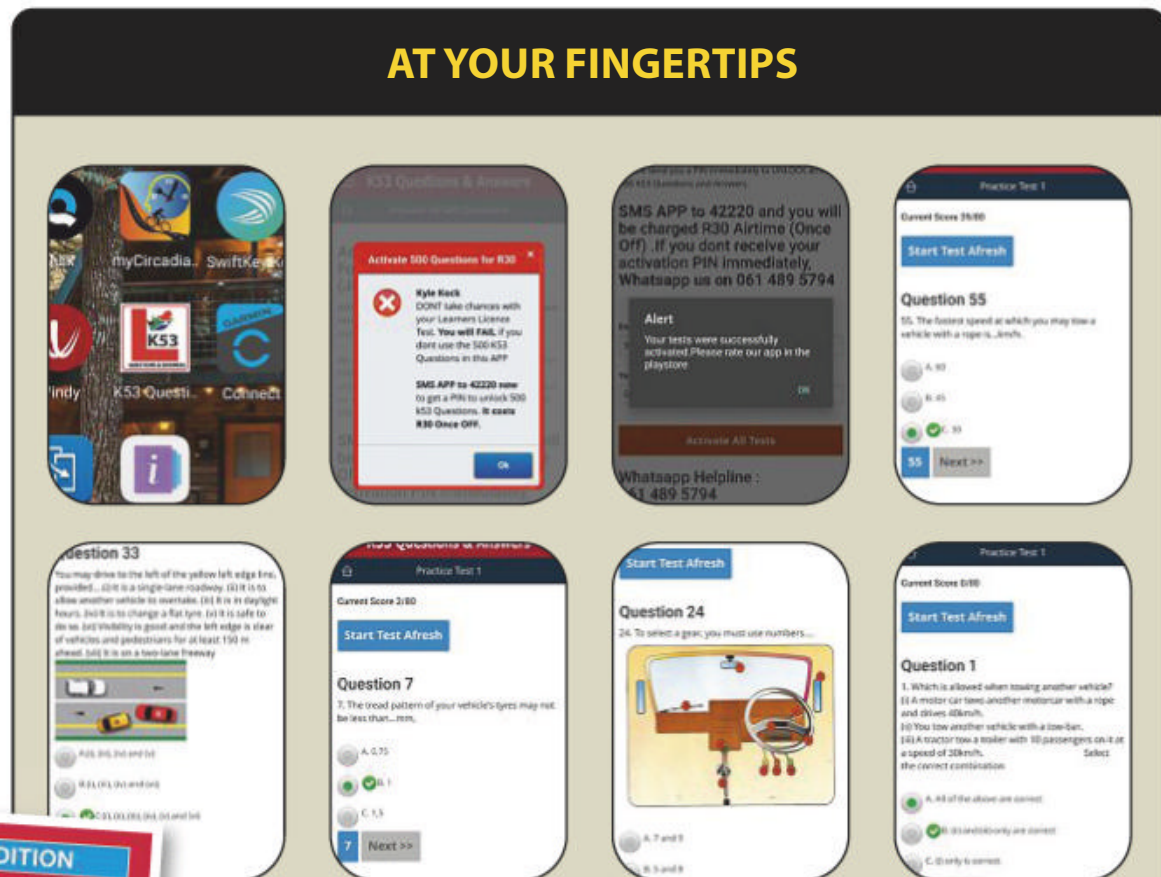
or Driving Test Centre and book a learner's licence test date. That means you're going to have to do the written test again. You'll need to take your identity document along, two ID photos (35 mm x 45 mm) and the application fee of R68.

You'll also need a proof of address, such as a utility bill or a letter from your bank confirming your residential address.

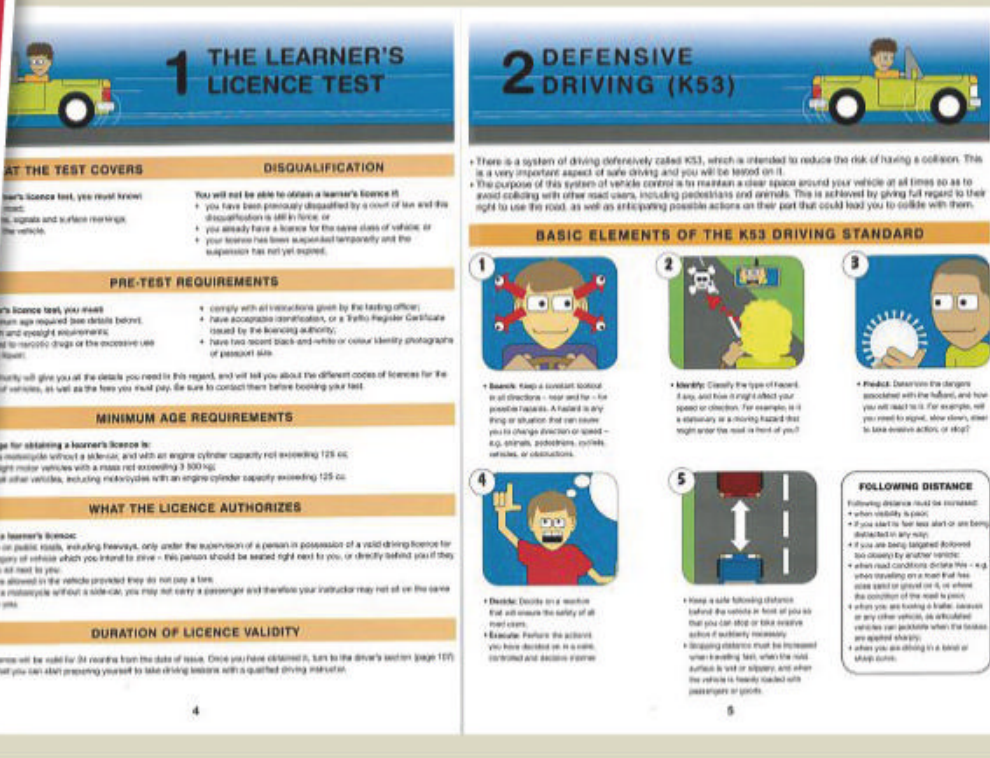
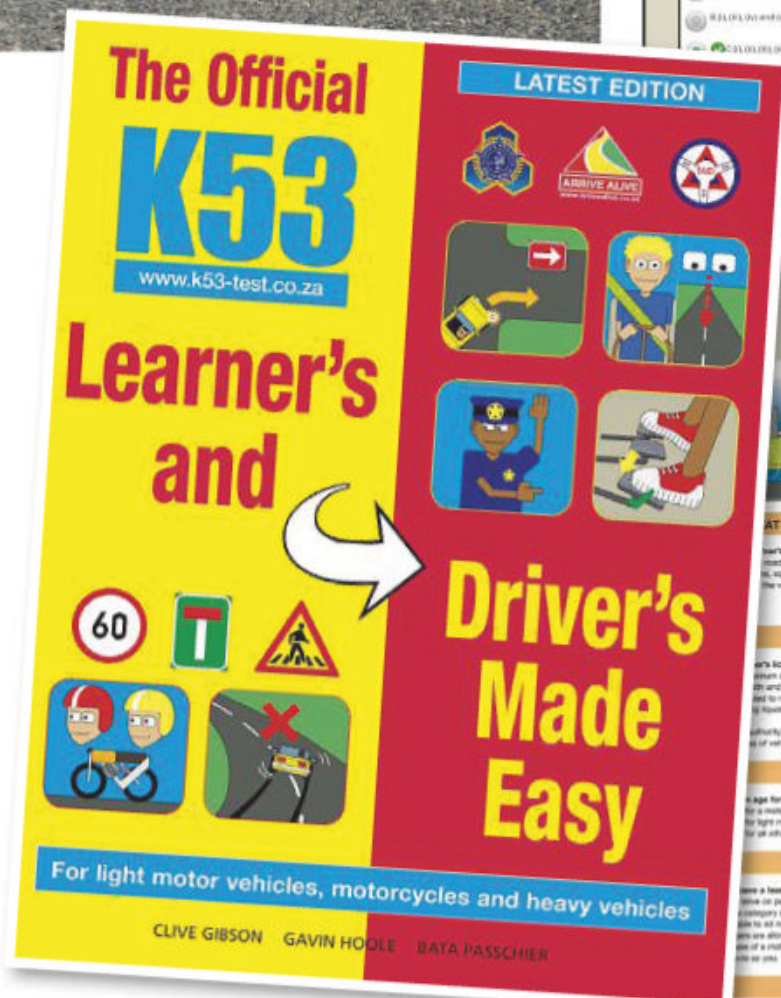
Some of the better equipped government houses use a new numbered queuing system that speeds up the application processes. You will also do an eye test with your application.

Once you've made the appointment, it's time to start studying. There is the official *K53 Learners and Drivers Made Easy* book, which you can find in a bookshop

AT YOUR FINGERTIPS



Training wheels. The first step is obtaining a learner's licence, which includes a lot of theory. You don't need to memorise the entire book, though (above). It's far simpler to rather purchase an app with a few question papers that will prepare you for the test within hours of downloading it.



BACK TO SCHOOL

or at a newsstand. I borrowed a copy from a colleague, who also shared a few old exam papers and answer sheets with me so I could 'practise' writing the test.

But by far the easiest method is digital, because there are a number of apps you can download that will help you prepare for writing your test. I purchased one called K53 Questions & Answers. The version you can download for free is just 25 MB. It will have a trial list of 25 multiple choice questions you can answer. The aim is obviously to answer all the questions correctly.

You will get bombarded with notifications thereafter warning you that you might fail if you don't buy the other seven sets of question papers. It's just R30 and, once you pay, you get a password that you insert once you reopen the app. Then, all the questions and answers are there forever until you delete the app.

The required pass mark is high, and rightly so. We wouldn't want to risk having new drivers on our roads who aren't familiar with basic road signs. The K53 app will

definitely enable you to pass your learners but, to truly gain plenty of insight, perhaps invest in the official *K53 Learners and Drivers Made Easy* books. Or buy the official K53 app (R40 on Google Play).

If you've been driving for a while, you'll be very familiar with the usual signs you come across on your daily routine, and probably surprise yourself at what you've forgotten over the years. For example, you're supposed to stop at least a car's length between you and the vehicle in front of you. For the purposes of passing



The instructor will first assess your driving competence by asking you to perform one of the typical test exercises





Honestly, the learner's licence test is really not a difficult one to pass and, once you've mastered the questions on the app or in the book, you're ready to write. It can take a few days or even hours, depending on how much time you spend looking down at your phone.

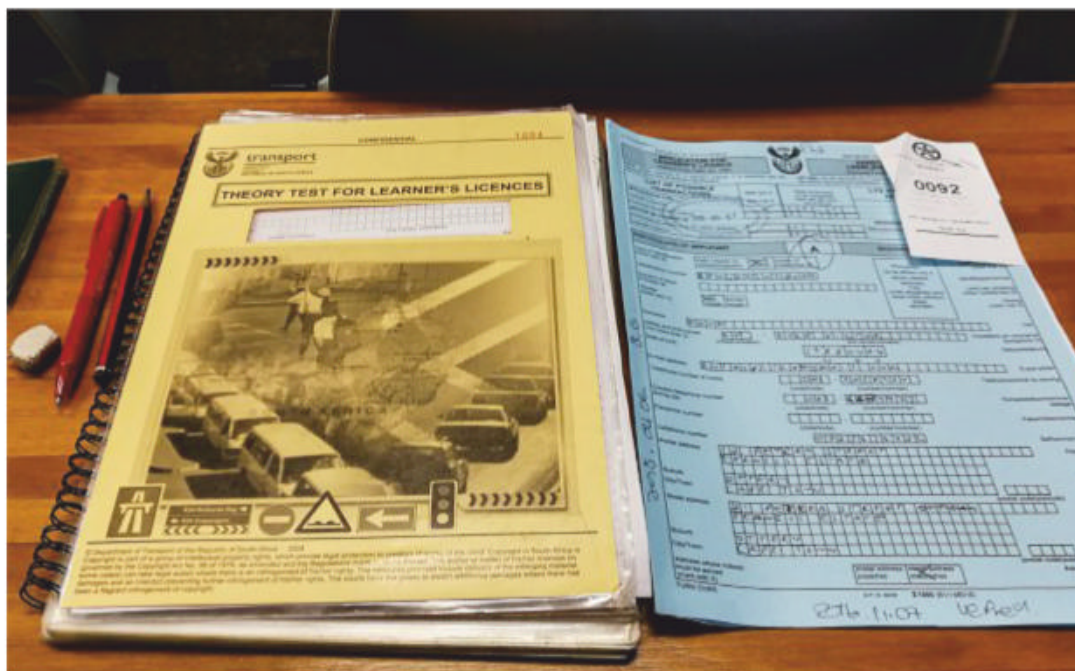
Then, depending on how confident you are with your driving ability, it's time to book your driving test. You need to make sure that you've circled the correct section on the form that states your appointment is for an EB test. You will be required to perform another eye test, make sure to remind the cashier when you pay (R140 this time, and another set of ID photos) that your appointment is for an EB test.

Then it's off to find a reputable driving school. Look into the driving school you're about to invest in. Check their success rate. If they have a page on social media, that's even better. Maybe you can check with past students what the experience is like and if they would recommend the same school. Don't just go with a fly-by-night operator because it's R50 cheaper per hour, as there are unscrupulous schools out there who set people up for failure, so you have to come back and spend more money.

 CITY OF CAPE TOWN - TOLKEEN STRAATMAN - 0210 4647100 THIS CITY WORKS FOR YOU TARIFFS	
Please note that with the effect of 1st April 2010 the following application fees will increase:	
Application for Learners Licence	R 68.00
Issue of Learners Licence	R 33.00
Application for UM/V Driving Licence: - B	R 135.00
Application for M/Cycle: - A; A1	R 135.00
Application for Driving Licence: - C; C1; EC1; EC	R 200.00
Issue of Driving Licence Card	R 140.00
Conversion of Foreign Driving Licence	R 140.00
Conversion of ID Book Licence	
Renewal of Driving Licence card	R 140.00
Application and examination of Instructors certificate	R 165.00
Issue of Instructors Certificate	R 33.00
Application for Professional Driving Permit	R 80.00
Issue of Professional Driving Permit on Driving Card	R 140.00
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(K2005/11) REPUBLIC OF SOUTH AFRICA APPLICATION FOR DRIVING LICENCE (National Road Traffic Act, 1998)		REPUBLIC OF SOUTH AFRICA AANSOEK OM BESTUURSLISENSIE (Nasionale Padwetwet, 1998)	
When applying for a driving licence, it is essential that the applicant provide accurate identification.		LET WEL: By die aansoek vir 'n bestuurderslisensie, is noodsaaklik dat die aansoekers sekerheid verskaf dat hulle akkurate identifisering verskaf.	
LIST OF POSSIBLE TRANSACTIONS 1. Application for: a) Licence b) Licence by virtue of Government permit licence c) Assessment of foreign driving licence d) Assessment of driving licence(s) in identity assessment paper card e) Temporary driving licence f) Driving licence card/Qualific	Mark with X Mark out X	Parts of the form to be completed: Date and the name of the applicant	LYS VAN MOONTLIKE TRANSAKSIES 1. Aansoek vir: a) Bestuurderslisensie b) Bestuurderslisensie op grond van 'n Regeringseksklusie c) Oorname van 'n buitelandse bestuurderslisensie d) Oorname van bestuurderslisensie(s) in 'n identiteitsbeoordelingskaart e) Tydelike bestuurderslisensie f) Nuwe bestuurderslisensiekaart HEMERSOEK OM 'N Kwalifikasie a) Bestuurderslisensie op grond van 'n Regeringseksklusie b) Bestuurderslisensie op grond van 'n Regeringseksklusie
NOTICE OF CHANGE OF Details of person (in g. 10, name, address) New licence document	Mark with X Mark out X	Parts of the form to be completed: Date and the name of the applicant	NOTISIE VAN VERANDERING Details of person (in g. 10, name, address) New licence document



BACK TO SCHOOL

your test, you have to be able to stop safely and demonstrate that you are able to do so while in full control of your vehicle. This means that you cannot coast in neutral before stopping. Either gear down or come to a complete stop in your current gear and then pull up the parking brake before selecting first gear and doing your

observations and setting off again.

EB VS EC1

For the sake of thoroughness, we wanted to compare two types of towing licences, EB and EC1, with me attempting the EB, because I only had the B, and editor Schalk Jonker applying for the EC1, as he got

the old Code 8 back in the day that was automatically converted to EB.

Wanting to do it the right way from the get-go, we decided to sign up for some driving lessons. Two academies came highly recommended: Alpha Driving School and He & She Driving School. For the purposes of this feature, Schalk chose He & She as they offer EC1, which left me with Alpha, who are primarily based in the northern suburbs of Cape Town. The school is run by Henri Swift, a former traffic official with the City of Cape Town who has been helping Capetonians ace their driving tests since 2012.

At Henri's school, there's also no physical exchange of cash. Your lessons are paid via EFT upfront. At the time of going to print, it costs R240 per lesson. Each lesson lasts an hour. And, on the day of your test, booking the car and trailer (R960) comes with a refresher before your test time so you're warmed up for the driving exam.

Check that your instructor has a valid





PRACTICE MAKES PERFECT. Your driving instructor will help you get ready for all aspects of the yard and road test. When you are in the hot seat, remember the tips, and trust that you have the ability and confidence – especially with things like the 40 m straight reverse and alley docking.





The 40 metre straight reverse is arguably the hardest yard test, as you're not allowed to use the clutch once moving

instructor's certificate from the South African Institute of Driving Instructors. The instructor should legally be fit to take you for lessons, so he/she should have a licence equal to or higher than yours. Your instructor also has to be sitting next to you.

The instructor will first assess your driving competence by asking you to perform one of the typical exercises you would have to perform when you go for your test. In my case, it was the 40 m reverse test. And this is arguably the hardest exercise of the lot, because to keep a trailer or caravan straight behind the towing vehicle requires some deft handling of the steering wheel and a near-perfect balance of the tow bar and the third axle.

For an EB licence, it's a good idea to

practise the manoeuvres that will be required of you to pass the exam, including the 40 metre reverse, left turn, alley docking, unhitching and parallel parking, and pulling off on an incline. Make sure you go over these thoroughly with your school.

Over at He & She, Schalk signed up for 10 lessons at R240 per lesson. The use of the truck and trailer for his final test costs an additional R710. These prices exclude VAT.

Schalk was assigned Retha Crous as instructor, who first took him to He & She's practice ground next to the Parow Traffic Department to get a sense of his abilities with the Nissan UD 35 truck and trailer. First up was the alley-dock manoeuvre and, to be totally honest, Schalk didn't exactly nail it that first time.



But, with a lot of patience and guidance, he could alley dock like a supremo by the third lesson. Next up was the straight-line reverse, which is tricky but manageable when you have your confidence levels up. Throughout, Retha kept reminding him about the correct observation sequence, drilling it into him. It's funny, but something that feels so completely unnatural during your first lesson starts to feel totally standard by your fifth. Nothing illustrated this better than having to engage the handbrake every time you stop.

Once Schalk was more at ease with the yard manoeuvres (these included the left and right turn and incline start) it was time to hit the streets of Parow to prepare him for the road part of the test.

Retha, a wealth of information, kept reminding him about the stop sequence, observation requirements and the rules of the road.

After 10 hours of intense training on everything EC1, Schalk was ready to take the plunge.



NOT FOR THE ROAD!

Things you are allowed to do in the testing centre yard or practice yard that aren't allowed when you're out on public roads.

- You don't have to wear your seatbelt for parking manoeuvres. Or anywhere else in the yard.
- You are allowed to cross your hands while steering.
- You are allowed to look out of the window to help you position the trailer while reversing/alley docking.
- You are allowed to rest your foot on the clutch pedal for all manoeuvres in the yard except one: the 40 m reverse.

Graduation day

Now that you know how to go about obtaining a learner's licence and towing lessons for the EB and EC1 driving codes, we take you inside what it's like to pass out.

So, you've made the effort to at least download the K53 app and have been learning the dos and don'ts of road regulations.

You've obtained your learner's licence and now all that remains is for you to go and pass out.

Here's the catch: you have to do this through a driving school. It's not just that they teach you the important sequences of using the controls while you're behind the wheel but also the starting sequences, interior and exterior inspections and a whole bunch of other information that's vital to making you a safe and competent driver.

The thing is, as much as we'd like to believe corruption is being rooted out of our system, it seems the system is constructed in such a way that would require someone, no matter how experienced or competent a driver, has to spend a significant amount of money in order to come out with a pass – especially when you're up against the authorities for the first time.

We're not saying that a pass without a driving school is impossible, but the chances are pretty good that you're not going to pass without going through a school and learning the K53 system inside and out.

THE SKILLS

EXTERIOR INSPECTIONS

You're required to blurt this out in parrot fashion, but it really does help to understand the meaning of what you're saying and repeating it when you're under the cold, hard scrutiny of the testing official. You start in the front of the vehicle by saying that you've checked under the vehicle for leaks and obstructions.

Then you move to the front fender and lift the driver's side windshield wiper. Run your finger along the rubber and say that the windshield wiper is undamaged.

Then, bend down alongside the front right tyre and mention that the tread depth



is sufficient (the legal minimum is 1 mm), that the tyre sidewall is undamaged, that you've checked that the air pressure is correct and that the valve cap is secure. From here, you move back to the bonnet and say you've checked under the bonnet as well, specifically the water, oil drive belts and brake fluid.

Once those are out of the way, you slowly move around the vehicle to complete the exterior inspections. Every time you pass a tyre, say that you've checked it (same as the first). You'll also need to show that the towing vehicle's tail lights are clear and free of damage. Then, show the testing official that the trailer has been secured properly and that the power plug is connected. You also need to tell the testing official that the trailer's licence disc is valid and up to date. Check the reflector strip and move around the rear and show that the trailer's lights are working, clear and free of damage. You also need to tell the testing official that the fuel cap is closed.

When you're doing the EC1, you have to check that the battery and cabin is secured



and that there are no obstructions between the double wheels.

INTERIOR INSPECTIONS

The officer will be positioned either right outside or inside the vehicle for this one. You will need to acknowledge that the doors are closed, that the parking brake is engaged, that the vehicle is in neutral,

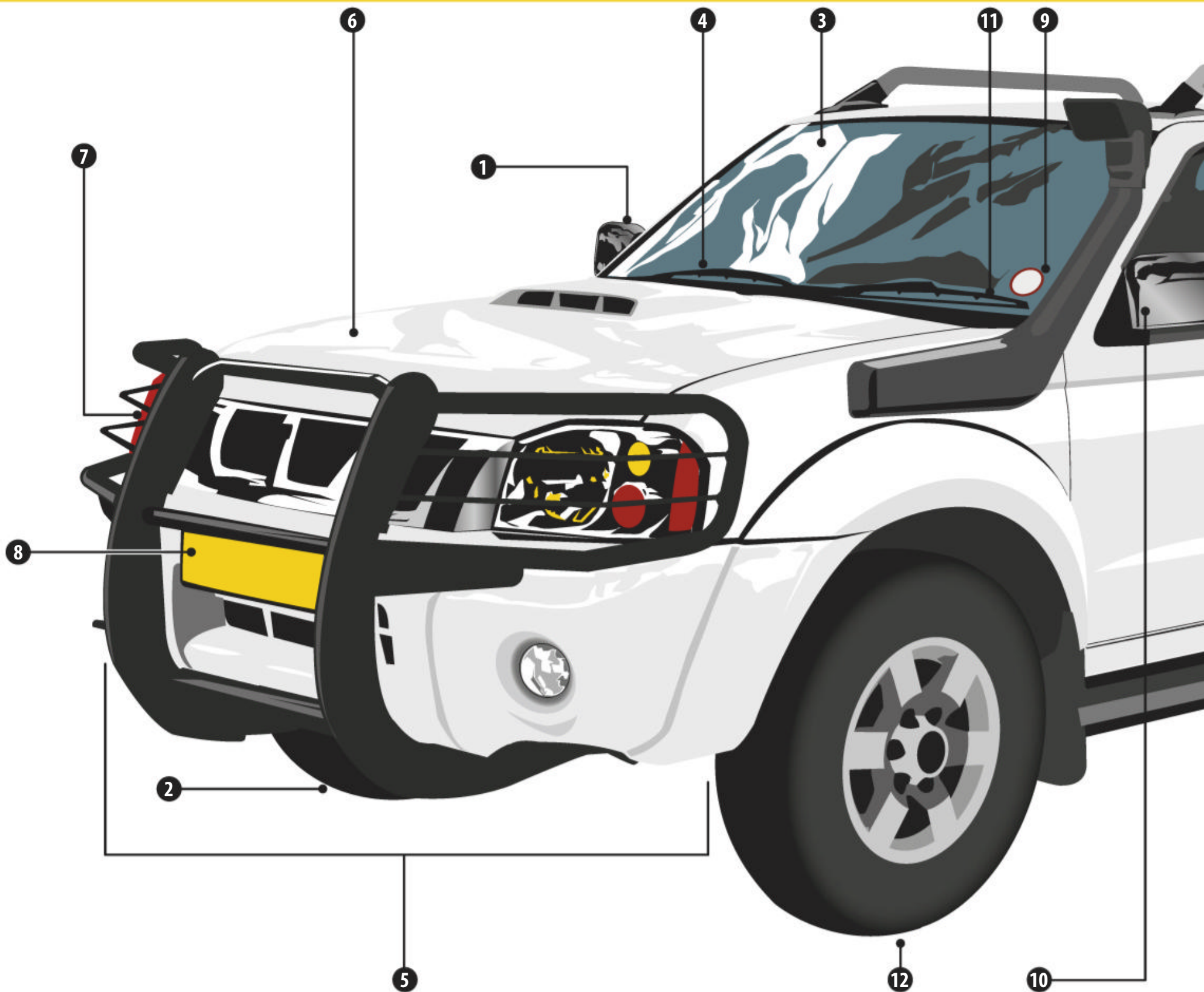
that there are no obstructions in the footwell, and that the mirrors and driver's seat have been adjusted to you. After that, it's time for the yard test.

LEFT TURN, CLYDE

This is a crucial part of your driving career. To be able to merge left safely is a must.



TEST TIME



EXTERIOR INSPECTION

The testing officer starts the test by asking you to do an inspection of the exterior of your vehicle.

START AT THE DRIVER'S DOOR

1 Check the right-hand mirror for damage. Also check the mirror's cleanliness and stability.

2 Check the front right wheel – the tread depth, sidewall damage, wheel nuts and

tyre pressure. Also make sure the valve cap is tightly fastened.

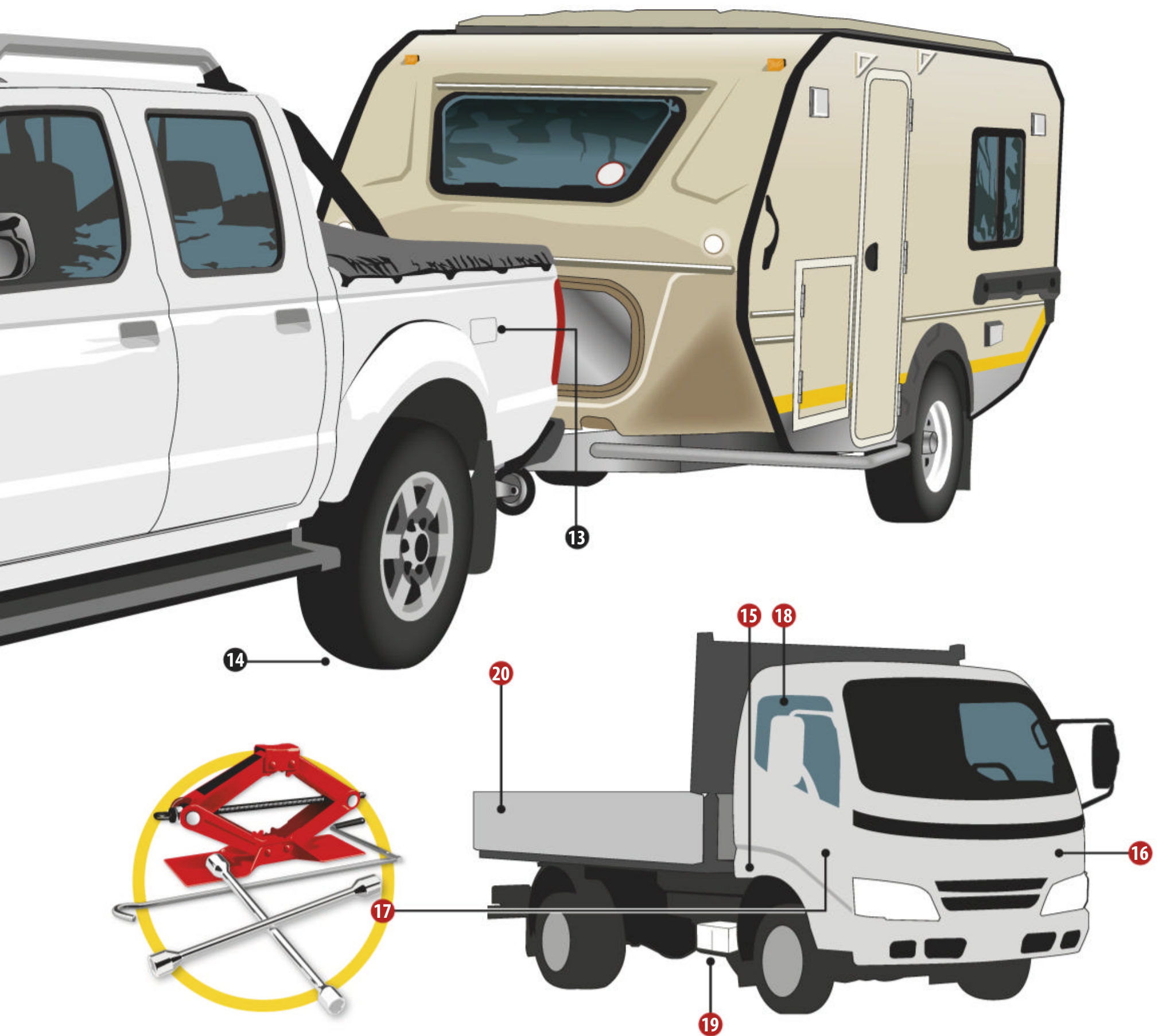
3 Check for damage to the windscreen and make sure it is clean and nothing is obstructing your view.

4 Check the windscreen wiper blade on the right for damage and stability. Leave them extended if possible.

PROCEED TO THE FRONT OF THE CAR
5 Check under the vehicle for leaks and obstructions.

6 Tell the examiner that you have already checked under the bonnet for the correct oil, water and brake fluid levels and that you've checked the fan belt.

7 Check the front lights, lenses and reflectors for damage and ensure they're clean.



8 Check the numberplate at the front.

PROCEED TO THE LEFT OF THE CAR

9 Check that the licence disc is valid.

10 Check the left-hand mirror for damage, stability and cleanliness.

11 Check the windscreen wiper on the left for damage and stability.

12 Check the front left wheel as per point 2.

13 Check that the fuel cap is securely fastened.

14 Check the back left wheel (in the same manner as the front wheels).

ADDITIONAL INSPECTIONS FOR THE EC1 TEST

15 Make sure the cab hinge is locked.

16 Mention that you have checked the oil and water level as well as the brake fluid

and the condition of the fan belt.

17 Mention that the jack, wheel spanner and emergency triangle are all in the toolbox.

18 Check the back window for damage and make sure it is clean.

19 Check the battery for damage and make sure it is securely fastened.

20 Check that the latch of the load bed is securely fastened.

TEST TIME



EXTERIOR INSPECTION

FOR THE EC1 TEST

21 Check the left back wheel (just like the front wheels).

22 Check the latch on the back of the load bed.

23 Check that the chevron plate and reflectors are clean.

24 Check the brake lights and indicators at the back for damage.

25 Check the exhaust for damage and make sure it is securely fastened.

26 Check the spare wheel just like the other wheels.

27 Check the right back wheel (just like the other wheels).

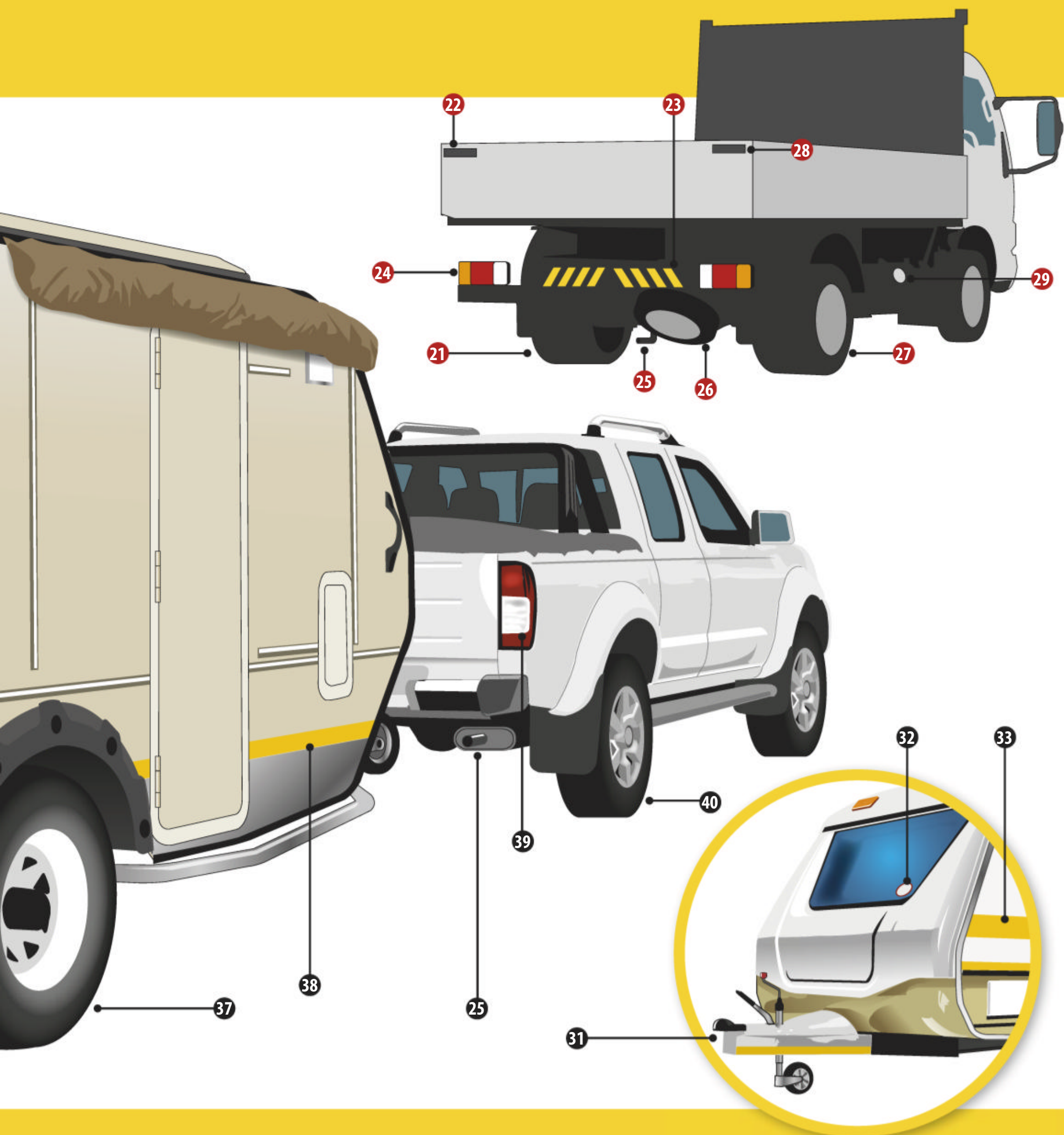
28 Check the latch on the right of the load bed and make sure it is securely fastened.

29 Check the fuel cap and make sure it is securely fastened.

PROCEED TO THE BACK OF THE TOWING VEHICLE

30 Check the towing vehicle's brake light and indicator on the left for damage and cleanliness.

31 Check that the caravan or trailer is



securely hitched, with the safety cable over the hitch and the power cable securely fastened.

PROCEED AROUND THE BACK TO THE RIGHT OF THE TRAILER

32 Check that the licence disc is valid.
33 Check the reflective strip on the left – it should be clean and visible.

34 Check the left wheel of the trailer in the same way as the vehicle's wheels.
35 Mention to the examiner that you have already checked that the trailer's lights are in working order.
36 Check the reflective strip and reflectors at the back for cleanliness and visibility.
37 Check the right wheel of the trailer

just like the wheels on the towing vehicle.
38 Check that the reflective strip on the right is clean and clearly visible.
39 Check the towing vehicle's brake lights and indicators on the right for damage and cleanliness.
40 Check the right back wheel on the towing vehicle (like the other wheels).

TEST TIME



INTERIOR INSPECTION

The traffic official will tell you to get in your vehicle for the interior inspection. For this test, the examiner can be either with you in the vehicle or outside. It doesn't matter.

1 Check for loose objects at the pedals and in your foothold.

2 Mention that you have adjusted your seat to be able to have full control over the vehicle.

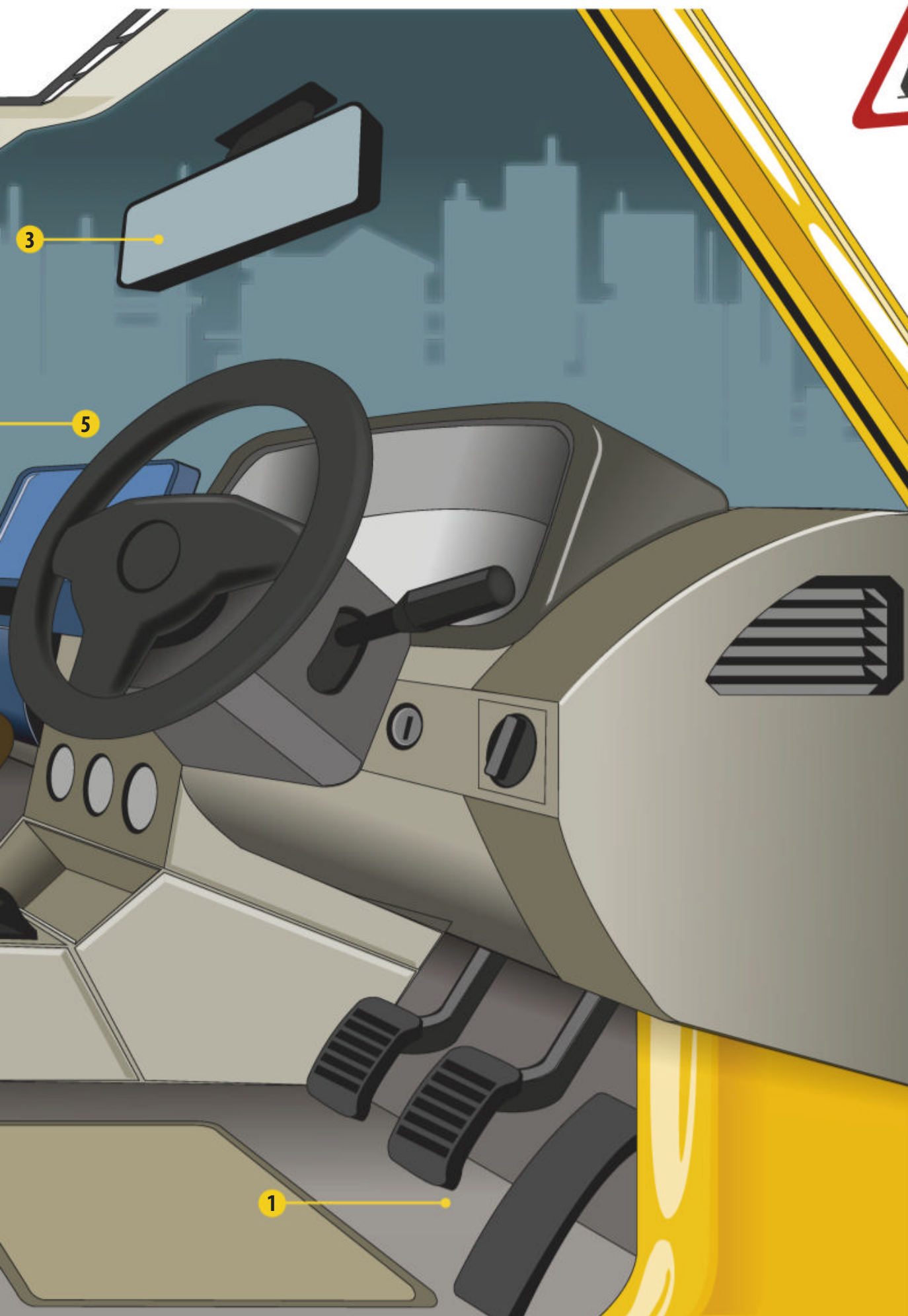
3 Check that the rear-view mirrors are

adjusted to give you a good view of the road and traffic behind you.

4 Mention that the hand brake is engaged.

5 Mention that the vehicle is in neutral.

6 Mention that all the doors of your vehicle are closed.



REMEMBER

The testing officer will ask the applicant to turn on the vehicle's lights and

indicators to test the horn and windscreen wipers. The operation of this will be checked by the officer.

- The officer may allow the repair of minor defects, but no extra time will be given (the stopwatch will not be stopped). A maximum of 20 minutes is allowed on the yard test.
- Items 1 and 2, as well as 5 and 6, are checked in order.
- While performing the inspection, remember to explain aloud to the testing officer what you are checking. In the case of point 6 of the external inspection, for example, you do not have to physically open the bonnet and point to the parts, but you must verbally state that you have checked the components, and state that to such an extent that the officer believes you know what you are talking about. For example, run your finger over your windshield wiper when talking about it.
- Depending on the weather conditions, the officer will be either inside or outside your vehicle to assess you.
- The road test usually takes between 20 and 45 minutes. The officer is not allowed to bring you back before the minimum time period has expired. In the unlikely event that the test lasts longer than 45 minutes - for example, if you end up in rush hour traffic - the officer should not assess you further after the elapsed time. However, this is a grey area, because you obviously still have to follow the rules and you are not allowed to commit a traffic offense. You literally have a representative of the court next to you, and he or she has the power to punish you if you break the law.

IGNITION PROCEDURE

After completing the yard test, the examiner will ask you to stop and switch off the engine before you start with the road test.

A Check that the hand brake is engaged.

B Check that the vehicle is in neutral.

C Turn the ignition key to the 'on' position without starting the engine.

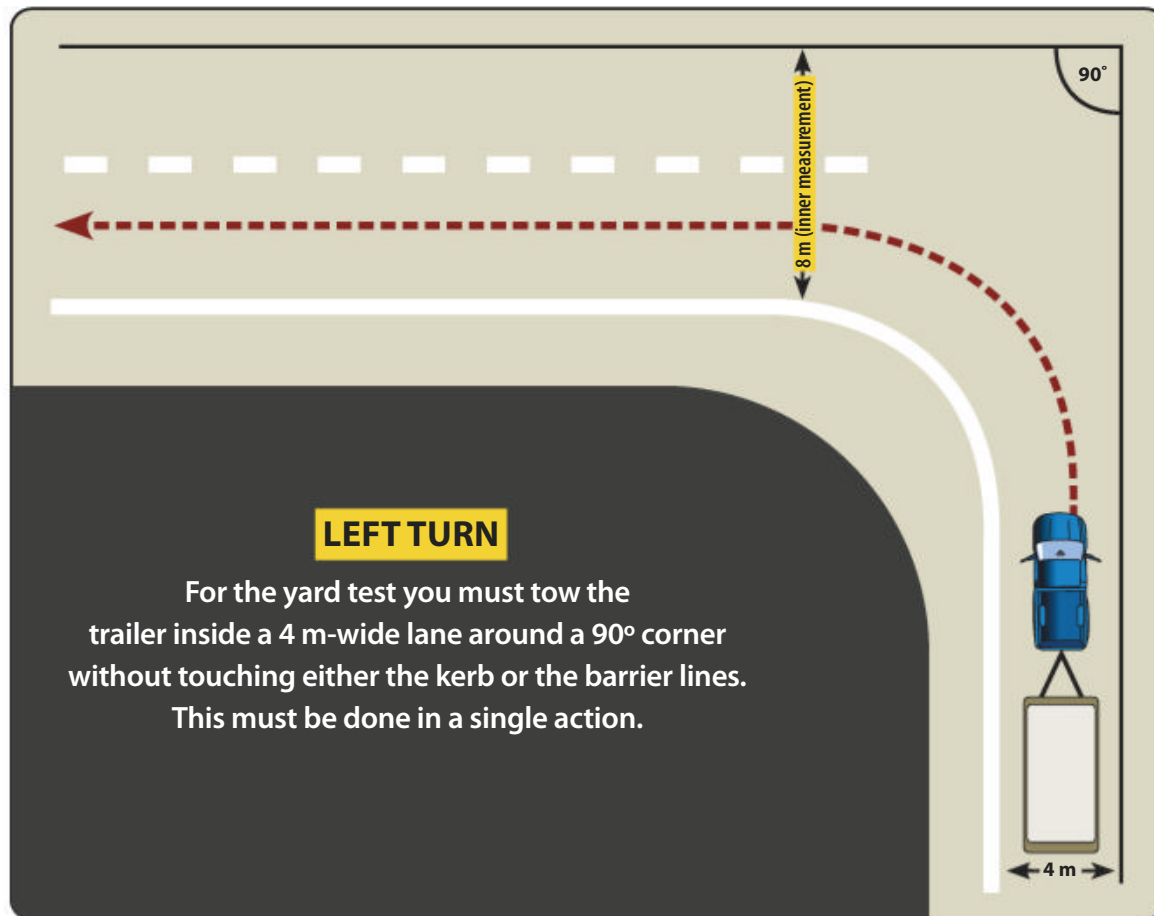
D Make sure all the warning lights are off. The only one that should be on, is the hand

brake warning light.

E Mention that the vehicle has an automatic choke, if that is indeed the case.

F Start the engine.

TEST TIME



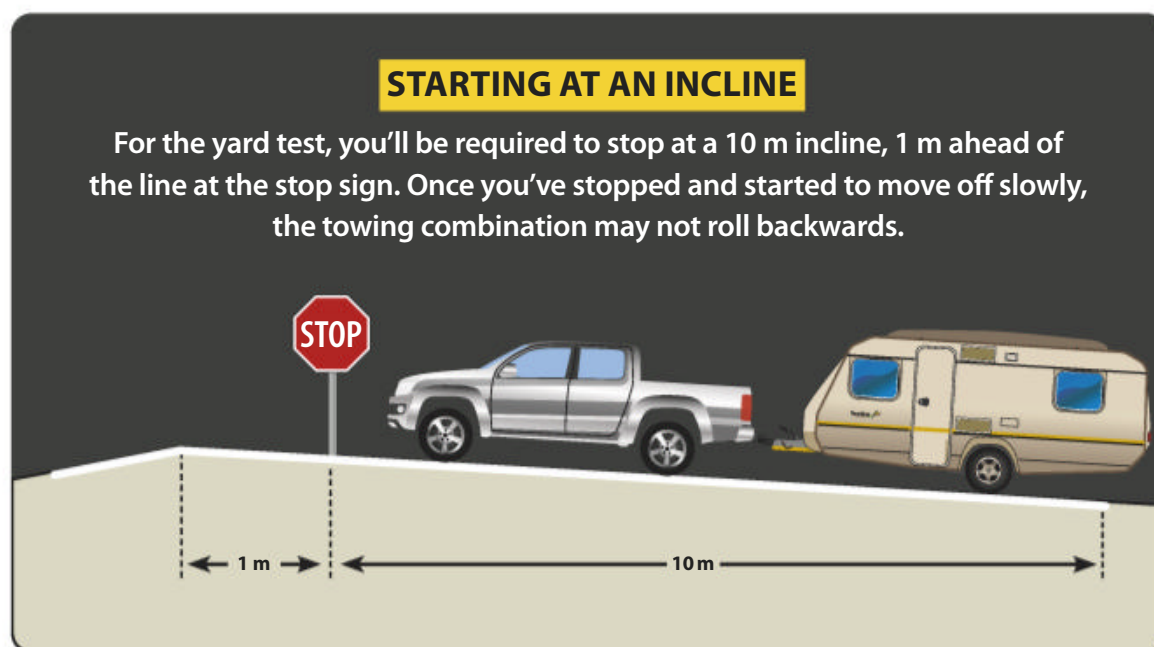
It's a left turn for obvious reasons. We drive on the left-hand side of the road, like Australia, Japan and the United Kingdom, as well as our immediate African neighbours. You'll have to demonstrate your prowess within demarcated lines in the test yard. After you pass the first line (the official will show you when the exercise has to be started), you'll have to check your rear-view and left-side mirror and the left blind spot before indicating left. Just before you turn left, you check the blind spot again. Midway during the turn, you check the mirror and blind spot. And once the vehicle and trailer combination has cleared the turn and the steering wheel has been straightened, you check the blind spot one more time. Better safe than sorry.

THE INCLINE START

Here you're required to stop your vehicle and trailer on an incline and drive off smoothly without rolling backwards, stalling, jerking or spinning the wheels. You get one attempt.

Remember to stop where the instructor indicates without allowing the vehicle to move backwards. Apply the handbrake, select neutral and check the mirrors and the blind spot. In Schalk's case, he had to perform a right turn immediately after, so he had to signal his intention. You then select first gear and obtain clutch control.

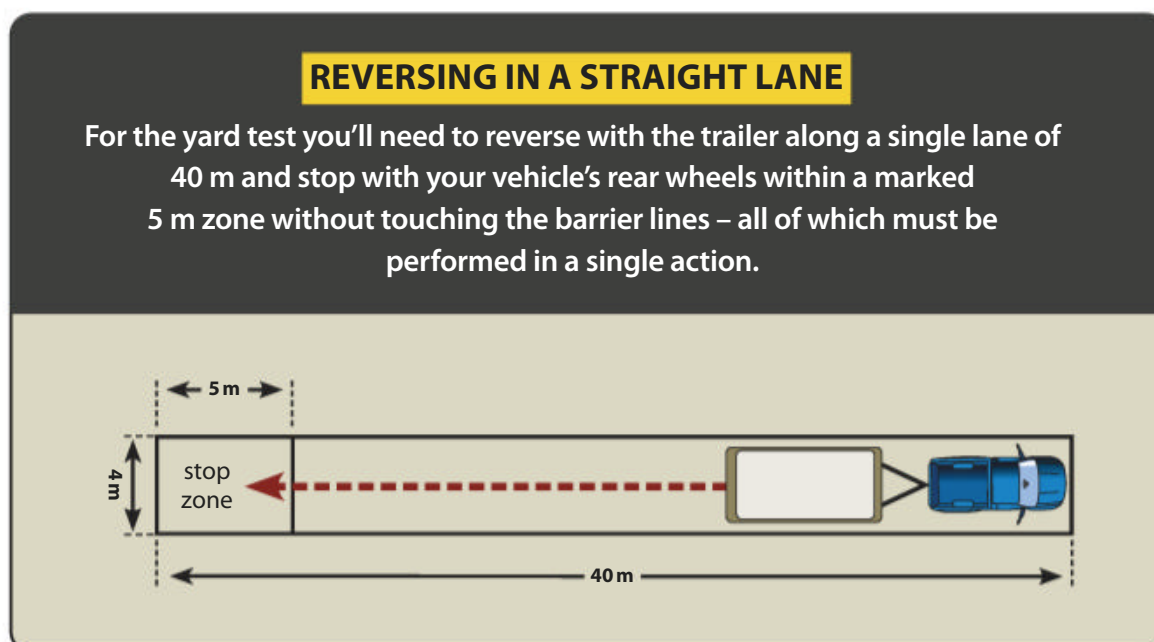
Observe 360° and release the handbrake. With an incline start you will likely need to accelerate as well as obtain clutch control in order to achieve enough revs to stop the vehicle from stalling or rolling backwards.



THE 40 M REVERSE

This is the exercise I failed when I went for my first appointment in July. Some might disagree, but I found it hard to keep the combination straight while the vehicle is pretty much idling. This is the one exercise in the yard where the officer will be checking to see if you're using the clutch to control your speed, because that's not allowed. When the clutch is depressed, either all the way or halfway, and you're not shifting, that's seen as an uncontrolled action and is a fail.

I didn't disengage the clutch all the way, and during the test the officer noticed this and warned me to let go of the clutch



completely. The resulting jerk was quite a surprise and the combination gained speed. I didn't cross any lines or miss the painted box you have to reverse the trailer into, but the difference in speed made it clear I had been "riding" the clutch and that resulted in me failing the test.

On my second attempt a month later, I made sure to keep my right foot hovering just above the brake, and as soon as the clutch started to bite, I controlled the speed with the brake instead. I passed the exercise.

ALLEY DOCKING WITH A TRAILER

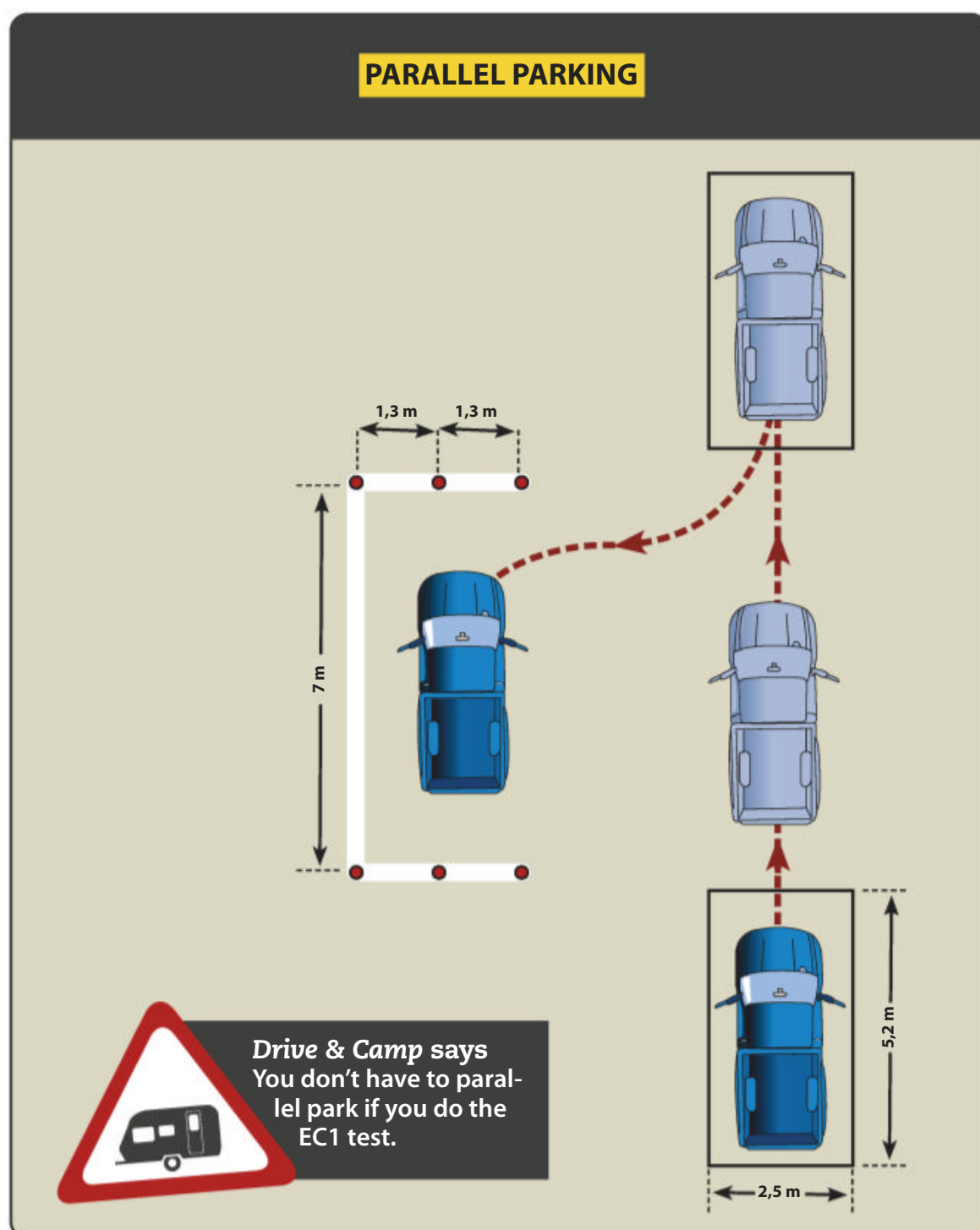
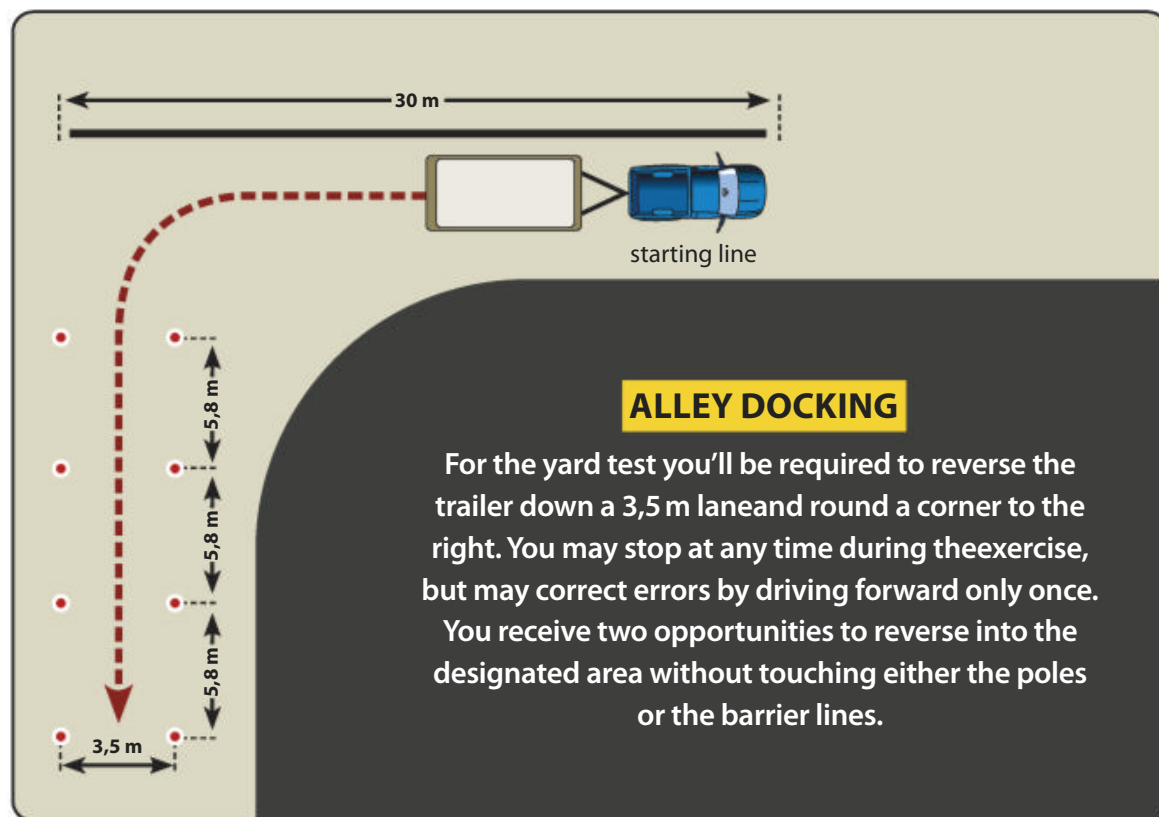
Schalk maintains that this was the most difficult exercise for him in that he was never sure when to start initiating the turn. There is no exact answer for this, but his instructor gave him the sage advice of reversing slowly and turning the wheel quickly.

The important bit to remember is that you have to check the opposite blind spot as well before you start the turn, because you could lose a penalty point needlessly. I preferred turning early and sort of lining up the trailer with the "entrance" in a horizontal line. That gave me enough time to straighten the combination at my leisure. The downside to waiting too long to initiate the turn is that you have limited space in the yard and if you hit the kerb on the other side of the area demarcated for the exercise, that's a fail. You could also jack-knife the combination quickly if you leave the turning too late.

Also, it's important to remember that you're allowed to stop during the procedure and inform the testing officer that you're going to move forward (in a straight line) a little to line up the combination properly or to your liking. It all counts as one manoeuvre and rather be safe than sorry that you didn't keep your ego in check and just move forward a little. The nose of the towing vehicle is required to be behind the second row of poles for the exercise to be a success.

LINE UP AND PARK

The yard test is probably the real tough part of whichever licence you're applying for. The entry-level EB is slightly more strenuous in that you're required to also unhitch the trailer you're passing out with during



TEST TIME



the yard test. You then have to perform a parallel park manoeuvre (one side or both as determined by the examination officer present) and then you have to reverse your vehicle and align the tow bar with the trailer's A-frame so that you can hitch. I learned a cool trick at Alpha Driving School that makes reversing toward your trailer a breeze. Remember that if any part of the vehicle touches or hits the trailer before you've intended to come to a stop, that's regarded as an accident and is an immediate fail. You don't have to perform a parallel park when you're applying for an EC1.

START-UP SEQUENCE

If you've passed the yard test, the testing officer will ask you to perform the start-up sequence. This is the final check to see if you're competent enough to be able to actually be let out onto the road. Schalk had to do his starting sequence before the yard test, so it varies from one testing centre to the next.

You have to show that the parking brake is engaged and that the release button works, that the vehicle is in neutral, and that

the warning lights are off. Then you turn the ignition on and check that the warning lights are functioning and that after the initial flash they're all off, except the parking brake. Lastly, inform the testing officer if the vehicle has an automatic choke.

ONCE ON THE ROAD

If you've just finished high school or have never had the need to be behind the wheel until your mid-20s, you'll probably be fine – especially after plenty of lessons with a driving instructor. If you're an experienced driver, however, you'll have to unlearn many of your bad habits. For example, you're not allowed to cross your arms while driving – even though that's allowed for your yard test.

Another one that many of us aren't really conscious of is that we tend to depress the clutch pedal before braking. That's an uncontrolled action according to the law and a fail. Firstly, you need to check your rear-view mirror before braking and only depress the clutch when shifting or coming to a complete stop. After stopping, pull the parking brake up. You need to perform a full suite of observations before moving off.

A good rule of thumb is to check your mirrors every time you drive by a lamp post. It feels silly, but you get marked negative points if you don't



Get your towing licence **go! Drive & Camp 29**

Before you hit the road

A long road trip is so much better when you depart to your destination prepared. Here is a quick refresher course where we recap road signs, the golden rules of the road, GPSes, tyres and the age-old problem of how much weight you're allowed to place on a tow bar...



If you drive a vehicle, it means you've passed a driver's licence test that required you to know road signs.

But there are a few lesser known signs, rules and information signs. If you know how to read these signs, it'll save you lots of money and prevent damage – and spare you from a few family fights along the way.

IT'S A MILESTONE!

Signs indicating distance and direction have come a long way. Just more than 2 000 years ago the Romans placed round stone pillars

next to the road to show travellers how far from Rome they were and in which direction the city lay. The pillars were supposedly planted at intervals of one mile (that is 1,6 km).

But all roads no longer lead to Rome, and nowadays our road signs indicate more than the distance to the nearest town.

When you're stranded next to the road in the middle of nowhere and you need to call for help, you must be able to determine roughly where you are. It won't help if you tell the emergency personnel you're somewhere between Richmond and Three Sisters and in the distance you can see a farm house with a blue roof.

The point of those blue signs of the South African National Roads Agency (Sanral) is to help you explain exactly where you are. You'll encounter them

every 200 m along our national roads.

They are blue with white text and the size of an A3 piece of paper (42 x 30 cm). On a dual carriageway the signs are on both sides of the road (at a 45° angle facing oncoming traffic) and on single carriageways only on the one side (parallel).

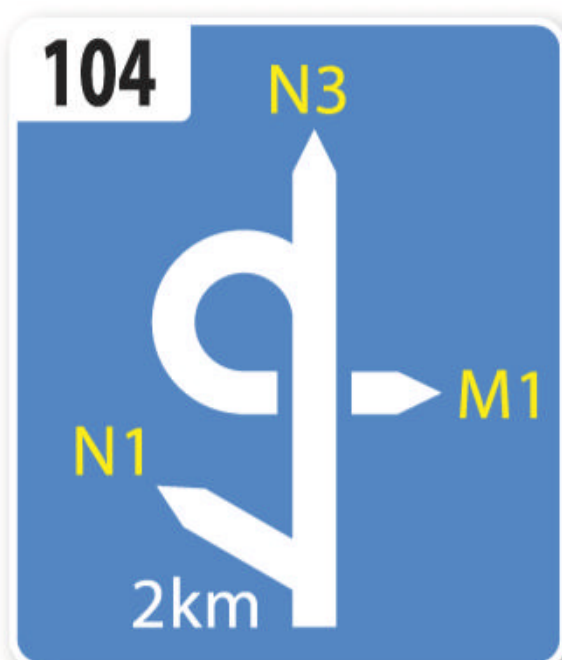
WHAT'S YOUR NUMBER?

People often refer to the number in the white block on the top left of the road sign that indicates an exit from the highway as an exit number.

This isn't entirely incorrect, but have you noticed that these numbers do not follow each other sequentially?

If you look closely, you'll see some of these numbers also contain a letter. This is because the exits are 'numbered' according to how far they are from the starting point





of the specific highway.

Here's an example: You're taking the N1 north out of Cape Town, the first exit you'll find is numbered 3, which is approximately

READ IT LIKE THIS

The road you're travelling on – for example the **N1**.

The specific section of the road – here Section **23** (an "X" after the **23** would indicate a temporary proclaimed route).

The distance in kilometres from where the section starts – here **40,4 km**.

The direction you're travelling towards – here **South**. It can also be North, East and West.

EARN YOUR STRIPES

The yellow line on the side of the road is a familiar sight, but what about the red one?

Do you know what the difference is?

- A yellow line is an indication that you're not supposed to park there, or in the case of main roads they indicate the shoulder or emergency lane.
- A red line is a warning that it's dangerous to pull over here and prohibits you from stopping under any circumstance.

3km from where the N1 officially starts. (At the bottom of Buitengracht, by the entrance to the Cape Town Waterfront).

A kilometre further is exit 4, but after that

you get exits 7, 10 and 13. When a single exit divides into more than one direction, each one gets a letter added to it, for example 7A or 7B.

A HISTORY LESSON

1870s

Where do you come from?

The granddaddy of modern traffic signs saw the light of day in the late nineteenth century, back when cyclists were described as people on “fast machines that move quietly and of which the peddles are difficult to control and that can travel long distances”. Road signs were placed for their benefit – to warn against slippery roads and steep hills ahead.



1903



Bad with the good. The first serious car accident in South Africa took place at a level crossing in the Cape when one Charles Garlick parked his dad’s Darracq in front of the Johannesburg Express travelling at full speed.

1909

Johannesburg 23 km

Miles become kilometres.

The metric system replaced the imperial system, and South Africa now measured in kilometres rather than miles.

All together now. The first traffic bosses in Paris, France, considered standardising traffic signs, and three years later the British announced four national road signs that indicated what the signs should look like. Shortly after that nine European countries agreed to use a common sign for a bump, turn, crossing and train crossing.



1971

Why right? In most countries in the world people drive on the right side of the road. This supposedly dates back to an era of horse-drawn wagons in America, when wagons drawn by several pairs of horses didn’t have space for a driver on a wagon. The driver sat on the last horse at back on the left-hand side with a whip in his right hand.

To better see the oncoming traffic, they had to keep left of him, and therefore he had to drive on the right side of the road.

Why left? The British discovered ancient Roman coach tracks indicating that these guys actually preferred the left side of the

road. The assumption is that riders kept left because most of them were right-handed. They could therefore hold the reins in the left hand and have the right hand free to greet oncoming riders or hold a sword when there’s trouble. (Or to show rude signs

to other coachmen that disobeyed the traffic rules. – Ed)

In countries like South Africa, Australia and India, which previously were British colonies, people still drive on the left side of the road.



Test your knowledge

Would you be able to pass your learner's licence test today?
Do you know the meaning of these road signs?

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	ANSWERS 1 Incoming traffic enjoys priority 2 No abnormal vehicles 3 No trailers (not even your Venter) 4 Exclusive parking space for rickshaws 5 Exclusive parking for minibuses 6 Coordinated traffic lights – if you keep at this speed, you should catch all the green lights 7 Reduced vision – especially in places that are prone to fog 8 You enjoy driving priority 9 Crosswinds ahead 10 South African national park 11 Namibian national park 12 Generic national park sign 13 Western Cape provincial park 14 Free State provincial park 15 Nature reserve 16 KwaZulu-Natal provincial park 17 Botanical Garden 18 National Heritage Site 19 Game reserve 20 State forest 21 Gauteng provincial park 22 Natural forest			
22				



Time to reflect

The reflective road markers we call “cat eyes” were patented in 1934 by a Briton named Percy Shaw.

There are several stories about how he came up with this brilliant plan, but the most likely version is a combination of two stories: Shaw apparently used the polished tram tracks in his hometown to distinguish the lanes on the road at night. However, when he lost his way one night, he saw the reflection of a cat’s eyes sitting on a pole next to the road and this helped him to find his way again.

Either way, these guys help keep you in your lane when fog, darkness or a wet surface make it difficult to see the painted lines on the road.

ON SOUTH AFRICAN ROADS, CAT EYES HAVE THREE DIFFERENT COLOURS YOU SHOULD KNOW

- **Yellow or orange** This indicates the leftmost yellow line on the road – in other words the shoulder or emergency lane.
- **White** This indicates a white dotted line in the middle of the road. So, if you are



driving at night and there are white cat eyes and you cannot see another vehicle’s headlights coming from the front, it should be safe to change lanes or pass the vehicle driving in front of you.

- **Red** This means the same as a solid white line on the road. You may not overtake red eyes or change lanes.



Do you know these golden rules?

You need to obey these rules... even if you take a quick drive to the shops.

In primary school we learnt that one must stop at a red light and proceed when it turned green, but there are several lesser-known – and sometimes weird – traffic rules you may not know about.

WHAT DOES THE LAW SAY?

What's your number? A number plate must be properly fastened to your vehicle, front and rear. There are special regulations for vehicles registered for the first time after July 2011. Fines differ between regions, but you can expect around R500 if one of your number plates are missing. If you drive without number plates, you can be arrested

on the spot. *(Regulation 35)*

Licence front left. You must stick the licence disc on the bottom left side of the windscreen where it can be easily read from the outside. This also applies to your trailer. If your trailer doesn't have a 'transparent windscreen', you must place the disc on the front left of the trailer or on the A-frame where it can easily be seen. If the disc is exposed to the elements, it needs to be in a weatherproof cover through which you can still read the writing. *(Regulation 36)*

Give back, that's mine! Did you know you can claim back your licence fee if your vehicle is stolen? The annual fee you paid, is divided by 12 and you'll receive the

remaining months' fees. *(Regulation 37)*

Shop talk. A motor dealer may not sell a car on his premises if it isn't registered in his name as 'dealer's stock'. *(Regulation 53)*

To your health! Authorities may declare your driver's or learner's licence invalid if you suffer from a medical condition that may lead to you passing out due to high blood pressure. *(Regulation 101)*

Where to now? If you've permanently moved to a new residence, you as the licence holder need to inform the authorities within two weeks after the move. *(Regulation 113)* It is now also compulsory to show proof of address when you renew your driver's licence – so



ACCORDING TO THE THE LAW

remember to take that municipal bill (not older than three months) along when you go queue with your cheque book.

(Regulation 32A)

Watch out! The driver of a fire truck, emergency vehicle or ambulance, as well as a traffic or police officer may exceed the speed limit and ignore traffic signs as long as they're busy performing their duties and have taken the safety of the other road users into consideration. *(Article 58 and 60)*

Now you see it, now you don't. When two traffic signs next to each other are contradictory, you obey the instruction of the temporary one. This often happens when there are road works. *(Regulation 287)*

Flash, 1 001, flash, 1 001... A light flashing next to the road – like the orange light warning you about road works ahead – must flash one to two times per second. *(Regulation 287)*

A sobering fact. If you're under the

influence of alcohol, you're not allowed to sit in the driver's seat when the engine is switched on – even if the car is standing still. You may also not refuse that the law enforcement officer draw your blood or say 'no' to the breathalyser test. *(Article 65)*

No tricks. You may not have any equipment in your vehicle that interfere with speed measuring devices. *(Regulation 292)*

Slow down! A goods vehicle of more than nine tonnes may not exceed 80 km/h – the same applies to any towing vehicle. Busses and minibus taxis may not drive faster than 100km/h. *(Regulation 293)*

Help immediately. If you're involved in an accident in which someone died or was injured or any property (including animals) was damaged, you must stop immediately and afterwards report the incident. If someone was hurt, you need to assist

them as far as possible. *(Article 61)*

Dad, may I borrow the car? You may not drive a car without the owner's permission, and the owner needs to have the address and licence information of the driver if he's lending out his car. *(Article 31 and Article 17 of the AARTO act)*

Playing MacGyver. Don't let your buddy put ideas in your head about his 'Banana Peel MK 5' device that deters thieves. It is illegal to equip your car with anything that can interfere with the brakes, even if it is to prevent theft. *(Regulation 149)* The same



When two traffic signs next to each other are contradictory, you obey the instruction of the temporary one



applies to devices that disconnect the steering rod. **(Regulation 200)**

Lights, action. Your car's lights must be intact – and must be able to stay switched on permanently. Between sunset and sunrise your car's front, rear and number plate lights must be turned on. **(Regulation 157)** And your car's lights must be such that you can see a person of average height 150m ahead. **(Regulation 158)**

Light on the topic. The number plate lights must work and be bright enough that you can read the text from 20m away at night. **(Regulation 170)**

Wink. If only one of your car's headlights is working, that light must be able to bright and dim. **(Regulation 159)** The bright must be strong enough for the driver to see a person at least 100m ahead in the road. **(Regulation 160)**

To blink or not. If your car is more than 40 years old, it doesn't need indicator lights. **(Regulation 193)** If your car has indicators, you must be able to see them from 30m



away in daylight. Front indicators may shine white or yellow and the back one yellow or red. **(Regulation 194)**

Can't see. Your car's front windscreen must allow at least 70% light through and side windows at least 35%. Material you apply to the glass to block sunlight, for example, may not have air bubbles or scrapes. **(Regulation 202)**

Is it a smoke screen? Your car may not emit so much smoke that it interferes with other road users and their visibility.

(Regulation 209)

And reverse, too. If your vehicle weighs more than 570 kg, it must be able to drive forward and backward. **(Regulation 211)**

No steel. Your car may not have 'steel tyres' – so no, you may not ride on your rims – and motorcycles may not have retread tyres. **(Regulation 212)**

Buckle up. If your vehicle has a seat belt, you are obliged to wear it. But this isn't required when you reverse or park. **(Regulation 213)**



ACCORDING TO THE THE LAW



Warn people. If your car breaks down on a road or on a shoulder, you need to put out at least one warning sign. The sign – such as a triangle – must be placed more than 45m away from the car, and must face oncoming traffic. This regulation doesn't apply if you're parked in a loading zone. *(Regulation 214)*

Keep an eye on that needle. If your car can go faster than 60 km/h, the speedometer must work. *(Regulation 215)*

Too big, sir. Your vehicle may not be wider than 2,5 m or higher than 4,3 m. *(Regulations 223 and 224)*

Sho't left. A turn radius may not exceed 13,1 m (turn circle therefore 26,2 m) and a wheel base may not be longer than 8,5 m. *(Regulation 225)*

Load carefully. If you load something on your bakkie, part of the load may not drag on the road, and it must be packed in such a way as to not interfere with your sight to the front, sides or back (in other words in front of the rear-view mirror). If you transport something on your car's roof, it may not be higher than 1,5 times the height of your car's roof, but this does not include bicycles on the roof. *(Regulation 246)*

Keep left. You must keep to the left-hand side of the road, unless it is a one-way road. *(Regulation 296)* In other words, don't crawl

along at 80 km/h in the right-hand lane, even though some people like this so much.

The other side of the yellow line. During daytime you may drive to the left of the yellow line on the shoulder of the road if you want to allow someone to pass you, but only if you can see at least 150 m ahead of you. This does not apply after sunset. *(Regulation 298)*

Watch out where you stop. You're not supposed to stop at an excavation next to the road where you can obstruct other traffic, or in a tunnel, or within 6 m from where the road becomes narrower, or on the wrong side of the road with your car pointing against traffic, and also not within 9 m from a pedestrian crossing. *(Regulation 304)*

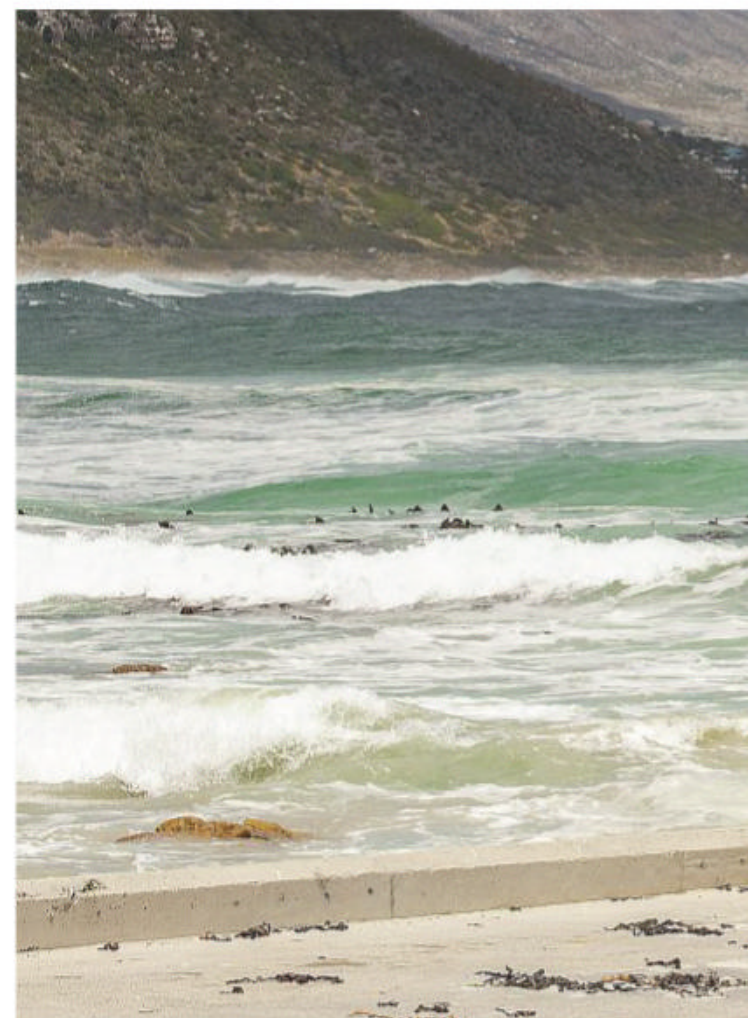
Take a hike. You may not park on a traffic island, even if all the parking spots at Junior's under-9 rugby match are taken. *(Regulation 305)*

I said 'stop'. Traffic officials are not the only ones that can order you to stop. You must comply if a horse, sheep, pig, ostrich or mule herdsman tells you to stop. *(Regulation 307)*

Know your place. No part of your body may protrude from your car while you're driving, except when you as driver gives a hand signal to turn, for example. You may not transport a person or animal on your

car's roof – not even that pesky cousin-in-law. *(Regulation 308)*

No sis, man! You may not leave your car idling and you may not throw 'offensive material' out the window along the way. *(Regulation 308)*



Switch off. When you stop at the petrol station to fill up, you must switch off the engine. *(Regulation 308)*

Hello, hello? It's no use clutching your phone between your chin and shoulder while you're driving. The law is quite clear: You may not drive and hold your phone in any hand or with any other body part. *(Regulation 308A)*

Look where you're going! There may not be a screen, such as that of a DVD player, in the driver's sight while he or she's driving. *(Regulation 308B)*

Silence! Your car may not be excessively noisy. This goes for the engine, exhaust pipe and the 'Pop Shop Hits' in your CD player. *(Regulation 310)*

Beep-beep. Your hooter is there to warn people around you in an emergency. It is not a Morse code machine or doorbell. It will also not make the guy that just pushed in front of you disappear. *(Regulation 310A)*

Let them walk. When a vehicle stops at a pedestrian crossing, you may not overtake that vehicle. *(Regulation 315)*

No spin, no cry It doesn't matter how fancy your Sentra is with its new mags and dropped suspension; you may not spin your wheels on the road, unless it's an

emergency. And it definitely doesn't count as an emergency when Tiny van der Merwe with the LEDs behind his Chico's grill is flirting with your girl. *(Regulation 321)*

Slowly does it. If you're towing another car with a rope, for example, you may not exceed 30 km/h. You may not tow any vehicle with a motorbike. *(Regulation 330)*

There can be only one. Motorbike riders may not ride next to each other, except when overtaking each other. This does exclude traffic officers though. *(Like Poncherello and Baker in CHiPs. – Ed.)* A motorbike rider must have at least one hand on the handle bar, and both wheels of the bike must always be in contact with the tar. So forget about a wheelie... *(Regulation 309)*

In the saddle. Bicycle riders must sit on their bike's saddle with one leg on either side of the bicycle frame. Bicycle riders must also ride behind each other and not next to each other, except when overtaking someone. You may not put an extra load on your bike – person or animal – if it obstructs your view. You must always have at least one hand on the handle bar and, again, you may not wheelie. *(Regulation 311).*

Back only. A bicycle must at least be

equipped with back brakes if you want to ride on a public road. *(Regulation 152)*

Shrek's best friend... A donkey cart must display the owner's name and address. This information must be placed on the front left of the cart and the letters must be at least 2,5 cm high. Outside of built areas, donkey carts may not ride closer than 150 m behind, unless overtaking. *(Regulation 314)*

We're not all welcome there. You may not travel on a highway with a donkey cart, tractor, bicycle or motorbike smaller than 50 cc. Rather look for an alternative route. *(Regulation 323)*

Pedestrians to the right. When walking on a road without a sidewalk, you must walk on the right-hand side of the road, as close to the shoulder as possible – yes, against the traffic. Pedestrians must cross at pedestrian crossings or road crossings – or within 50 m thereof. *(Regulation 316)*



go! Drive & Camp

says The good news regarding the speed limit is that you have 10 km/h

grace before the traffic official may issue you with a fine. But this doesn't apply where authorities measure your average speed over a distance – then you're in trouble even if you went just 1 km/h too fast. If an official doesn't fine you on the spot, the notice must be mailed to you within 30 days of the alleged infringement.





Let's talk about torque

What is the difference in towing capacity between a diesel and petrol engine? What is the best gear to tow in, how do you prevent trailer sway, do you know how to properly set your car's rear-view mirrors, and what is a safe towing speed?

Everybody knows that when you say "Break a leg," you don't mean it literally. And every caravanner knows that the more torque your vehicle produces, the better its towing capability will be. If you want to know exactly how hot or cold it is outside, you use a thermometer, so if you want to

know how much torque your vehicle can generate, you have to know how many Newton meters it delivers.

Newton meter is a standard unit used to measure torque. The formula states that torque is equal to 1 N being exercised at a right angle on an arm of 1m in length.

You cannot simply use an engine's

capacity as a yardstick. There are 1,6 litre engines that put certain 2,5 litres ones to shame, and diesel engines almost always have more torque than petrol engines of the same capacity or less. Why is this so?

RECIPROCATATION NATION

Let's start at the beginning: diesel



and petrol engines are both internal combustion engines and work on similar principles. An internal combustion engine is based on a four-stroke system that works as follows:

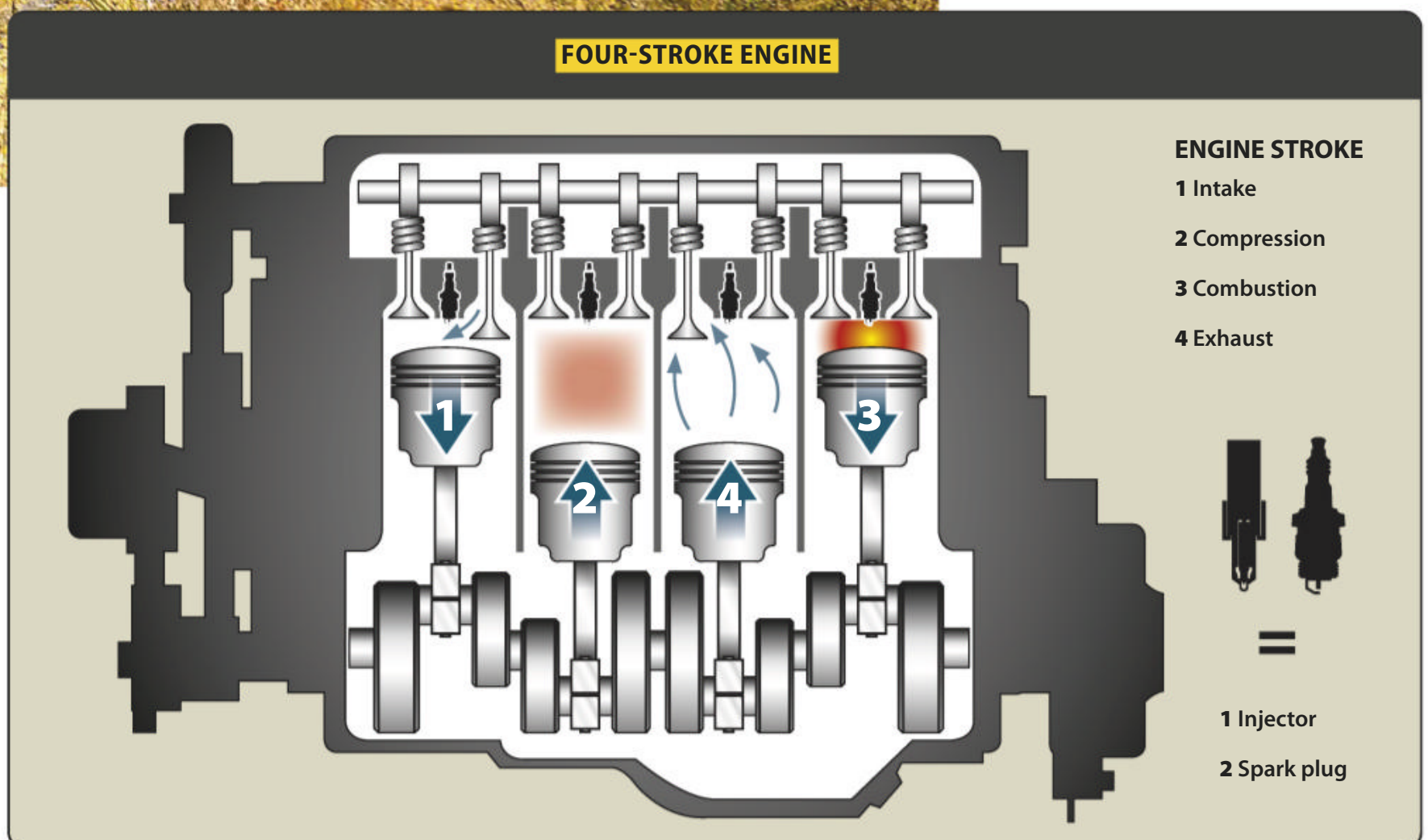
1 Breathe in. When a piston moves from its apex position to the bottom, it draws air into its chamber.

2 Press. The piston rises to the top of the chamber again and compresses the air.

3 Watch out! The compressed air/fuel mixture ignites and the force presses the piston down again.

4 Breathe out. The piston rises up the chamber again and the spent air is expelled through the exhaust manifold.

The difference between a petrol and a diesel engine lies in the explosion at stages 1 and 2. In a petrol engine, the air that is initially sucked into the cylinder is a mixture of air and vaporised petrol. After the mix is compressed in the second stroke, it's ignited by a spark plug. In a diesel engine, the air that is sucked in during the first stroke is clean air, which then gets compressed during the second stroke. At this point, an injector shoots



TOWING TIPS

diesel into this high pressure environment, and due to the pressure and the chemical characteristics of the diesel, it explodes spontaneously without the need for an electric spark. *(Like your wife when you forget your wedding anniversary – Ed.)*

PRIMED FOR LOCOMOTION

Each piston is attached to the crank shaft by a rod and a bearing. When viewed from the side, the crank shaft has a zigzag shape, with a piston attached to each point of this up-and-down shape. When you turn the shaft, the points orbit a central point. It is this rotation of the crank shaft that causes the pistons to move up and down inside the cylinders. The distance from the point where the piston's rod attaches to the crank

shaft and the crank shaft's central pivot determines how much torque the engine can deliver. In other words: The larger the arc in the crankshaft, the more potential torque. This arc works like a lever.

To understand it better, picture lifting your vehicle with a jack. The longer the lever on the jack that you use to pump up and down, the easier it is to lift your vehicle, and therefore the more torque you have.

One of the more distinct characteristics of a diesel engine is that it has a longer suction stroke than a petrol engine. Put differently, the pistons in a diesel engine moves up and down over a longer distance in its chambers than those in a petrol engine.

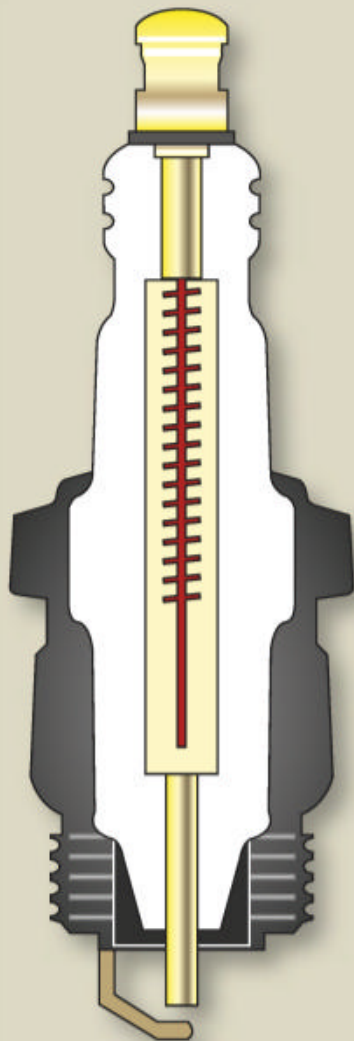
The distance from the crank shaft's zigzag points (as explained before) is also the reason why diesel engines rotate at fewer revolutions per minute than petrol engines. The shorter this distance, the shorter the stroke distance of the piston, which in practical terms mean that the engine can rotate much faster.

This rotation is expressed in revolutions per minute, or rpm. In an engine that rotates faster (like a petrol engine) you therefore sacrifice torque, but because the engine can rotate faster, with more revolutions per minute, it produces more power, measured in kilowatt (kW) which enables you to drive faster.

OTHER FACTORS

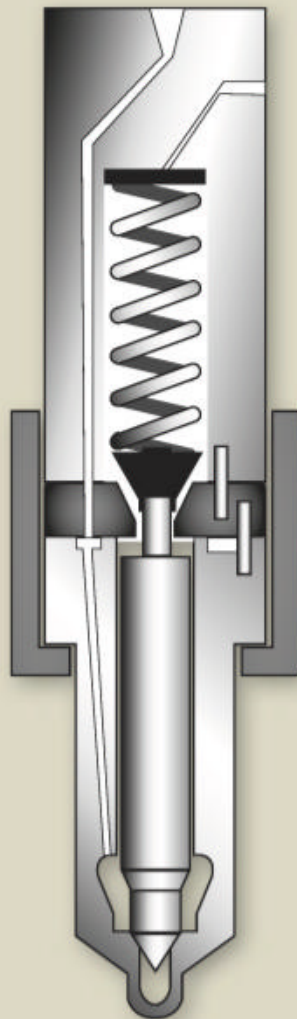
Apart from producing more torque, diesel engines also have other incidental advantages that inadvertently contribute to them being more frugal than petrol engines.

SPARK PLUG



A petrol engine uses spark plugs to ignite the petrol fumes, while a diesel ignites spontaneously under pressure.

DIESEL INJECTOR



While petrol engines use fuel-injection systems or a carburetor, diesel engines simply work with a diesel injector.



Apart from producing more torque, diesel engines also have other advantages that contribute to them being more frugal than petrol engines

Same, but different. The difference between the two types of fuel starts with their unique characteristics. Both are made from crude oil through a refining process, but petrol is refined a lot more than diesel.

Because diesel is less refined, it is more viscous compared to the more flammable petrol. Diesel used to be cheaper than petrol in the past because of the fact that its refining process requires less energy. Since 2004, the tables have turned, however, because the worldwide demand for diesel has increased. It's also true that the quality of crude oil has

changed, and today the refining process of diesel requires more energy than in the past.

Diesel has more kick. Diesel has a higher energy density: 1 litre of diesel contains a lot more energy – 40,1 MJ (mega joule) compared to 34,7 MJ in petrol. It's also one of the reasons why fuel consumed by a diesel engine is less than that of an equivalent petrol. You need less diesel as you would petrol to cover the same distance.

Under pressure. The pressure in a chamber at the second stroke differs

markedly in the two engines. When the piston in the petrol engine compresses the air-and-fuel mixture, the initial volume in the chamber becomes 8 to 12 times less, while the pressure in the diesel engine is much higher.

It can be 14 to 25 times less than the original volume. The diesel engine therefore has a higher combustion point, which leads to a higher torque output.

Lost energy. In diesel engines, about a third of the heat energy of the combustion process is transferred to the crank shaft, while in petrol engines it's up to 25%.

This kinetic energy eventually gets transferred to the driven wheels, but some of the energy gets lost due to friction among the engine parts and the drag coefficient of the vehicle. In theory, only a quarter of the diesel fuel's original energy is used to propel the vehicle. That figure falls to almost a fifth in petrol-driven vehicles.



go! Drive & Camp says Diesel engines release less toxic gasses such as carbon monoxide and carbon dioxide, so they impact the environment less negatively. The downside is that these engines release a large amount of nitrogen-containing pollutants, which contribute to acid rain, among other things.

Internet sources: Wikipedia, Rjmason, Howstuffworks, Bankspower, Open.Edu, Wentec.



A weighty matter

As with everything in life, camping requires some admin that you need to get done before starting on your journey. Fortunately, it's not higher-grade stuff – but if you skimp on it, you may run into problems.

Get these basic concepts down pat for a safer start to your journey.

Tare. The mass of a vehicle without cargo (the weight on which licence fees are based).

GVM. The gross vehicle mass is the maximum that a vehicle may weigh – including its load, fuel, passengers and anything else that it transports. You'll usually find the GVM indicated on a plate on the A-frame of your caravan or trailer.

GCM. The gross combination mass is the sum of the weight of the vehicle and whatever it is towing – that is, the legal combined mass.

WHAT IS THE COMBINED WEIGHT OF YOUR TOWING VEHICLE AND YOUR CARAVAN OR TRAILER?

The combined weight of the two vehicles may not exceed the towing vehicle's GCM. (You will also find this on the towing vehicle's mass plate.)

Suppose you're driving a Toyota Land Cruiser 79 bakkie with a 4,0 l petrol engine and you want to tow a Jurgens Exclusive: according to Toyota SA's website, the tare of the bakkie is 2 055kg – so you can legally tow the Exclusive (with a GVM of 1 800 kg) with it.

If you load the Cruiser to its permissible GVM of 3 200 kg and the caravan to its maximum too, the two will have a combined mass of 5 000 kg.

The Cruiser's permissible GCM is however only 4 700 kg. Although the two vehicles aren't individually overloaded, they nevertheless do exceed the bakkie's GCM with 300 kg and the combination is therefore illegal.

$$1\ 800\ \text{kg} + 3\ 200\ \text{kg} = 5\ 000\ \text{kg}$$



TRAIN OF THOUGHT

It isn't illegal to hitch a trailer behind your caravan. The transport act was however phrased to make provision for trucks and tractors towing more than just one trailer. When taking into account the regulations regarding driver's licences, the gross combination mass and the brake system of the entire towing combination, it becomes technically quite problematic to legally drive your own little holiday 'train'.

If you want to tow a Jurgens Penta and a Venter trailer, for instance, the

requirement that apply are as follows:

Towing vehicle The tare of the towing vehicle must be more than 2 tonnes. (A Land Cruiser qualifies, but not the Nissan Champ that you inherited from your uncle.)

Driver's licence You need to have an EC1 driver's licence (or a Code 14 licence, which was issued prior to 1998.)

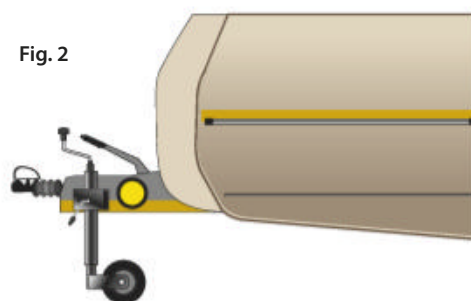
Trailer Even the trailer towed behind the caravan will have to be fitted with special brakes.



Fig. 1



Fig. 2



VEHICLE LICENCE

The best place to display your licence disc is the rear window of your caravan (figure 1). If yours doesn't have a rear window, any other window will do – as long as it's clearly visible for traffic officials. For a trailer, you must have a round licence disc holder mounted on the A-frame (figure 2). An information plate with the trailer's certified gross vehicle mass (GVM) and gross axle mass (GA) must be displayed – usually also on the A-frame. When your trailer's licence expires, you can still tow it legally for 21 days before you'll have to get a new one.

Vehicle and caravan weight. Legally, the GVM of your trailer or caravan may not exceed the tare of your towing vehicle. Experts recommend a minimum difference of 20% less.

Axle mass. On the same plate on which you find the towing vehicle's tare and GVM, you'll also see 'GA front' and 'GA rear'. This indicates to the gross axle mass of the front and rear axles. Distribute the load in such a way that the axles won't be overloaded.

LOAD LIMITATIONS

To determine how much you can load into and onto a vehicle, simply subtract the tare from the GVM. For example: 3 200 kg (GVM) minus 2 200 kg (tare) equals 1 000 kg (allowed load).

Remember that the load includes yourself, passengers and things like the spare wheel, toolbox and fuel. If you

weigh 80 kg, your spouse 60 kg, your kids 30 kg each, the dog 5 kg, a spare wheel and toolbox each 5kg and a full tank 85 kg (a total of 330 kg), the calculation would be: 1 tonne permissible load minus 330 kg equalling 670 kg. If your luggage weighs more than 670 kg, the vehicle will be overloaded.

$$2200 \text{ kg} - (\text{Driver} + \text{Passenger} + \text{Child} + \text{Dog} + \text{Spare Wheel} + \text{Toolbox} + \text{Fuel}) = 670 \text{ kg}$$

TYRE LOAD INDEX

A vehicle's tyres can also be overloaded. On the sidewall of a tyre, you'll find a written description indicating the maximum load rating of this particular tyre. If the maximum load capacity of a tyre is multiplied by the amount of tyres and the vehicle outweighs this total, it is not only a traffic violation, but also extremely unsafe.



Keep your eyes on the road

Road accidents are a terrible reality: According to the World Health Organization about half a million people die annually due to malaria, but double that lose their lives in road accidents..

Statistically speaking, South African drivers unfortunately do not have the best track record when it comes to road safety. To be blunt, it is particularly bad. We have the highest number of road deaths per 100 000 people, and to make matters worse, a study by Discovery Insure showed your chances of being involved in an accident are highest when you travel long distances by car during the holidays.

HOLIDAYMAKERS SUFFER

In Discovery's study the behaviour of motorists travelling long distances during the holidays is compared to that of those commuting in cities daily. It seems drivers travelling during holidays are more impatient, because speed infringements increase by 26% during this time. More people also tend to drive at night during this time, because this number also increases by 5,5%.

According to an official report titled "Snapshot of the Road Traffic Management in South Africa", which documented accidents in 2011, more than 60% of all fatal accidents occurred over weekends. This is a dreary picture, but from these statistics you can learn some lessons to make travelling safer.

PLAN CAREFULLY

Be careful on a Friday. According to Discovery's research there's 15% more traffic on the roads on a Friday. It seems the impatience to get to weekend destinations also makes people worse drivers, because according to the report this is also the time when most people speed and drive recklessly.

Be afraid of the dark. It's better not to drive between 10 at night and four in the morning. Your chances of being in an accident are 10

times higher than at any other time during the day. It will be a mission to get everyone in the car late at night anyway.

Everything keeps going right... If you check your vehicle carefully to ensure it's roadworthy before you depart, you lower your chances of being in an accident by a good 15%. (Chances of a family fight while you wait for a towing service are also considerably lower...)

TAKE IT EASY

It's common knowledge that you must stop and stretch your legs regularly when you travel far. According to Discovery, the drive from Gauteng to the KwaZulu-Natal coast will take you five and a half hours if you stop and

take a 15-minute break every two hours. If you drive straight through – and 5km faster than the speed limit while you're at it – you'll reach your destination an hour earlier, but your chances of not arriving at all also double. This is besides the fact that you'll get tired behind the wheel.

BEHAVE YOURSELF!

Let's be honest: No vehicle gets into an accident by itself. Someone must do something – or not do something – to cause an accident. Drivers' negligence is the biggest cause of accidents. This refers to stupid behaviour such as ignoring the speed limit or reckless driving – including overtaking on an unsighted/blind hill. To smoke, eat or drink

PROGRESS AND SAFETY



The safety of your vehicle goes hand in hand with technology. This includes from the design to factors like exhaust gasses, which negatively impacts the environment. But it remains the driver's responsibility to make the right decision at the right time...



Windscreen

A windscreen is designed to shatter in an accident.



Crumple zone

These parts absorb some of the impact force in an accident.



Seat belts

A seat belt prevents you from being flung about in the car on impact (or, even worse, falling out!).



Airbags

These are air cushions that inflate out of the panels to protect occupants if the car hits something.



Daytime lights

When your car's lights shine during the day, you are more visible.



Anti-lock brakes (ABS)

Brakes work better when the wheels continue to turn while braking.



Traction control

The car's computer ensures the wheels do not spin on the road.

“
No vehicle gets into an accident by itself.
Someone must do something – or not do something – to cause an accident

(even if it's only food or a cool drink) while driving, distracts you and increases your chance of getting in an accident. And then there are the cellphones...

RATHER CALL LATER

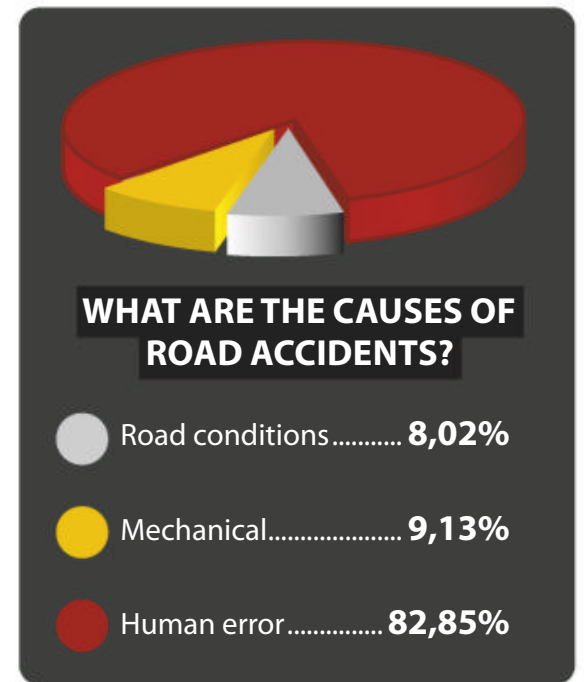
Your chances of getting in an accident are four times greater when you use your cellphone while driving. Anton Ossip, chief executive at Discovery Insure, says two thirds of drivers use their phones while they drive, and many even try sending SMSes while behind the wheel. According to Discovery's research, drivers in Limpopo are most prone to use their phones while driving, while Capetonians are the most law-abiding in this

regard. Apparently about 40% of cellphone users in vehicles have a hands-free kit, but 80% of all calls made from cars are made without these.

Discovery reckons your attention is distracted for almost a minute when you use your cellphone. This is like driving with your eyes closed for 1 km at 60 km/h.

BUCKLE UP!

Thirty, forty years ago wearing a seatbelt wasn't compulsory, but today there's no doubt about how many lives it saves. According to the government's report 67% of occupants on the front seats of cars faithfully wear their seatbelts. They reckon if this



number increases to 80% for front and backseats, the number of fatalities will decrease by 30%.

go! Drive & Camp says It's easy to point fingers when someone angers you on the road, but keep your side clean first (and hope other motorists do the same).



Sources: Discovery Insure, the Road Traffic Management Corporation and the national department of transport.

Towing weight and driver's licences

The subject concerning towing weight and driver's licences is a complex one to say the least.



It's been a while since there has been such a complex subject in the towing world as the one concerning towing weight and driver's licences. After we published an article in our magazine about what you should be prepared for at the weighbridge – and what to do if you're overweight – we were inundated with queries.

It seems every answer leads to another question. People are confused and angry about the situation and their feeling of helplessness.

The good news is you can do something about this yourself.

PUT THAT FINGER AWAY

The information on your trailer's disc differs from what your trailer weighs. The tare weight is heavier than what the weighbridge says and according to the gross vehicle mass (GVM) you're overweight if you pack anything more than a case of tomatoes.

Now you're angry at the world and you're looking for someone to blame.

Whoa, says Fanie Marx of the South African Caravan Association (SACA). "The problem has many causes, and most of these are associated with competition between manufacturers – and this has a long history. Yes, the truth may have been bent a bit and chances might have been taken to ensure a trailer is the lightest on the market, but this isn't going to help you one bit at the weighbridge.

"The law is clear: It is your responsibility to ensure your combination is legal. The law enforcement officers are not going to say 'quickly phone your trailer manufacturer to come solve this dilemma'. I reckon we must stop pointing fingers and fighting, take the matter into our own hands and correct it. Get yourself to a weighbridge, find out what your trailer weighs and do what you must to get the paperwork in order," Fanie says.



DO THIS

Willem Brits, a reader from Pretoria, recently went through the process of getting the paperwork for his 2011 model Jurgens Exclusive in order. He says he realised he would have to determine his caravan's empty weight again after he installed air-conditioning, a caravan mover and a bamboo box mattress (which is heavier than the original).

He contacted his local traffic department and asked which weighbridge the authorities recognise. He got an answer and headed that way with his caravan's registration documents. Here Willem was helped with the weighing process and the end result was that his empty caravan was 300 kg heavier than the tare weight on the disc. It cost them R220 at the weighbridge.

Afterwards they went to the testing site to put his trailer through the test again. The axles, tyres and brakes among others were checked, as well as the lights and reflectors – to ensure the trailer is roadworthy. This cost him R347.

Willem then handed in his documents from the weighbridge and the testing site at the licensing office. Shortly afterwards a new licence disc with the adjusted tare weight was issued.

But the problem was that the trailer's tare weight and GVM were now exactly the same, which meant they wouldn't be able to

load anything in the caravan. They explained the problem to the people at the licencing office and were referred to a Data Fix counter where they took all their documentation.

Here the bureaucracy got in the way a little and there was a to and fro about which forms should be completed, but eventually they got on the right track with the correct documents. They had to return two weeks later.

When Willem's wife, Surette, arrived two week later to collect the new licence disc, the information was unchanged. According to Willem Surette then threw a bit of a tantrum and later that same day she left with the correct licence. The trailer's GVM is now just over 200 kg more than its tare weight. In the end the whole proses took just over a month and Willem says he must now just replace the trailer's disc.

NOW WHAT?

Alta Swanepoel, a legal advisor specialising in road transport and traffic law, says she's glad to hear about people like Willem who are

Get yourself to a weighbridge, find out what your trailer weighs and do what you must to get the paperwork in order

doing something about the situation.

"I think a huge problem in South Africa is the DIY-attitude. It is after all easy for us to add something and change our trailer a little here and there. But it's shocking how few people understand that those changes can make their trailer totally unroadworthy. Therefore, it's good to hear there are people who follow the correct process to get on the right side of the law again."

It all starts at the weighbridge, Alta says. "Find out from your local traffic department which one you can go to to get the ball rolling."

But she is surprised to hear Willem could get his trailer's GVM changed. "It's only the National Regulator of Compulsory Specifications (NRCS) that can change



KNOW WHAT TO EXPECT. The more you know about what the law allows you to tow, the less you have to stress about a law enforcer stopping you at a weighbridge.

TOWING TIPS



a vehicle's GVM. You can get the tare weight changed yourself, but only the manufacturer, together with the NRCS, can change the GVM. I understand there are cases, especially with older models, where the manufacturer isn't in the country anymore, and then you can go to certain test sites where they can calculate it for you.

"But you cannot decide for yourself that the GVM must be changed. If you change it yourself, it will still be incorrect on the eNaTIS system, because the vehicle specification stays the same if it doesn't get homologated again.

"In Article 1 of the Road Traffic Act there is a definition of GVM and gross combination mass (GCM), and both state only the manufacturer may change these. Most testing sites don't touch the GVM, because this is that vehicle's maximum safe capacity.

"The manufacturer must take things like the trailer's tyres, the brake specifications and

axles in account and accordingly determine what the GVM must be. There are certain minimum standards. If you change these and the vehicle is in an accident, you'll have huge problems," Alta warns.

THE TRAILER BUILDER SPEAKS

Bradley Salters, managing director of Jurgens Ci, says he is aware of people who've gotten their trailer's tare weight and GVM changed, but Jurgens Ci are still finding out exactly what the situation is.

"We've had many requests from our dealers and from customers who want to get their trailer's information changed, especially people with older models," Bradley says.

"There are several reasons for this, and one must also note that the legislation has changed after many of these caravans were manufactured. As far as I know, the process

must include a letter of authority from the manufacturer. In that letter the manufacturer must say that it isn't opposed to the changing of the GVM. But this only applies to those specific caravans and not the whole range. If the whole range's GVM needs be changed, only the manufacturer may do so."

Bradley says his team and himself have met with Alta to try and understand what their options are. "It's important to make our customers' lives as easy as possible. We must get guidelines with regards to GVM in place, because there are specifications that need to be adhered to. I suspect in the case of people who've up to now managed to change their trailer's GVM themselves, there wasn't confirmation given by the manufacturer.

"We have in the meantime made a document available to our dealers that explains the process people need to follow. People can also get that important letter of authorisation from their local dealer."

Time for new tyres

The saying goes there are two things you can't escape: death and taxes. But there are a few more things that fall into this category.

Sooner or later you'll inevitably go out for dinner with your stingy brother-in-law with the expensive taste and at the end of the meal he'll suggest you split the bill 50-50 – even though you had the fish and chips while he enjoyed exotic imported mushrooms marinated in the Pope's tears. It's also inevitable that a school's sponsor form will arrive at home asking you to donate R1 per word for some or other reading Olympiad your child has to take part in.

It is as inevitable that you'll have to replace your caravan's tyres at some stage. This is never pleasant, and it always feels as if it's too expensive. And while we understand you're going to shop around for the best value for money, it isn't always a good idea to put Honest Ernie's bargain-of-the-week tyres on your trailer. There are a lot of elements to consider.

LOOK AT THE MANUFACTURER

"A good starting point is to look at how the manufacturers decide on the tyres their caravans are fitted with in the factory," says Clive Cox, Jurgens Ci's development manager. He says the first thing they consider is the size of the wheel rim. "This can range between 13, 14 or 15 inch, but this is more of aesthetic thing than anything else," he says. "In fact, we're moving away from 13-inch rims because they are so difficult to get hold of nowadays. At the moment most of our caravans are on 14-inch ones and our bush trailers are on 15-inch rims."

Once the size of the rim has been established, they look at the tyre itself, Clive says. "One of the most important factors we consider is if the tyre can carry the caravan's load. And for this we look at the caravan's gross vehicle mass (GVM). For this purpose we use the weight of the heaviest caravan in our various ranges, for example the Exclusive.

We then take its GVM and use the load index for tyres that is internationally recognised to find the appropriate tyre. This then applies to all the caravans in that range. For example, if you have a single-axle caravan with a GVM of 2 000kg, the law states that each of the caravan's tyres must be able to carry a weight of 1 000kg."

SPEED FREAK

Clive says the second, and equally important, consideration is the tyres' speed limit. "In terms of our legislation, where we're not

allowed to go faster than 120 km/h, we therefore need tyres with a speed limit of at least 120 km/h. The tyres that are available in South Africa can go up to a speed of 180 km/h or even faster – not that you must tow that fast. But the reason there's a speed limit on tyres is related to the composition of the rubber the tyre is made from.

"When you drive, heat builds up in your tyres, and they are developed and manufactured to ensure the rubber in your tyre can stay intact at that particular speed and heat. If you therefore drive at 120 km/h



TOWING TIPS

and your tyre's speed limit is only 80 km/h, you can be sure your tyre is going to burst sooner rather than later. It is extremely important to take note of the tyre's speed limit, because it can lead to major problem if you make a mistake."

WIDER WIDEST

Once the carrying capacity and speed limit have been sorted out, they decide on the width of the tire. "We look at 185 mm, 195 mm, 205 mm or whatever the case is. But this is less important than the load index and speed limit of the tyres," Clive says.

They then find out which tyres that adhere to these specifications are available on the market. "For our caravans we use commercial tyres. These are similar to those used on minibus taxis, specifically because of those tyres' carrying capacity. We don't fit ordinary sedan motor vehicle tyres on our caravans.

"We look at what is available on the market from the various suppliers. For understandable reasons we do not buy tyres on the retail market, but rather from people who import them or directly from the factory. So we definitely also consider the price of the tyre and try to establish savings for our clients."





THE SPECIFICATIONS

All the information you need about your caravan's tyres, is on the side of the tyre. As an example, let's use the tyre the Sprite Tourer SW, with a GVM of 1 450 kg, is fitted with in the factory – a **215/80 r 15 110 s** tyre.

- The **215** is the width of the tyre in millimetres.
- The **80** is the tyre's profile, meaning the relation between the height of the tyre's side opposed to its width. This is given as a percentage.
- The **R** is for radian, which basically means there's a low enforcement that runs across the tread.
- The **15** means the tyre was developed to fit onto a 15-inch rim.
- The **110** is the tyre's load index. According to the index a tyre with a 110 index can carry a weight of 1 060 kg. This means the carrying capacity of the two tyres on the caravan is 2 120 kg.
- The **S** is the tyre's speed limit, meaning it was made to travel up to a speed of 180 km/h.

NEW TREADS

If it's time to buy new tyres for your caravan,

Clive recommends you stay as close to the specifications of the tyres the caravan originally had.

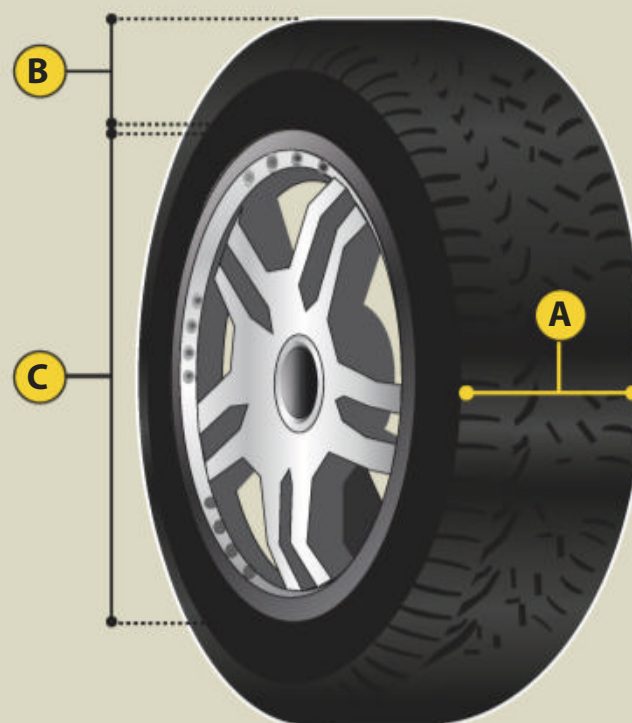
But when is it time to replace them? According to the Road Traffic Act your tyres are legal if there is at least 1 mm tread left on the tyre. The tread needs to be even across the width and circumference of the tyres, and the pattern must still be clearly visible. But Clive warns that tyres also expire, even if they still have more than enough tread left. "That rubber composition of your tyre has an expiry date and this is usually about five years after the manufacturing date," he says. The date your tyre was manufactured is also on the side. In the case of the Tourer SW's tyre we used as an example, it's the number 4313. This means the tyre was manufacture in the 43rd week of 2013, which means it will expire around mid October 2018.

"You often hear about guys with older caravans they haven't used for a while, who go camping and then a tyre bursts after travelling a short distance. This is because the tyre has expired, even though the tread was still good," Clive says. "The thing you need to remember about caravan tyres is that they never really reach their life expectancy in terms of kilometres travelled. It's not like with your car where you'll travel

THIS IS WHAT THE NUMBERS SAY



- A Width
- B Profile
- C Rim
- D Load index
- E Speed limit



TOWING TIPS

60 000 to 80 000 km with your tyres. In the same time frame your caravan might just travel 15 000 km.

But you still need to replace them after five years.”

KEEP A LOW PROFILE

But what to do if you want to soup up your caravan with brand-new 17-inch rims and a set of low-profile tyres?

You can and may, says Clive, if the rim and the tyre have the load index to carry your caravan’s GVM. Remember, this is divided by two – so if you want to put new tyres on your Tourer SW, they must each be able to carry a weight of at least 725 kg. You must also ensure the diameter of the rim and the tyre are the same as the standard tyre the caravan was issued with.

The reason for this is your caravan’s brakes. They are set according to the specifications of the standard rim and tyre, and if you surpass this, you’re asking for trouble. So never fit a larger rim while still using the same profile tyre as the standard. Always consider the overall diameter of the combination.

Clive suggests you chat to your local dealer and tell him about your plans to find out if they will work.

Another thing you need to consider when you want to fit new rims, is the position of the centre point (where the wheel bolts go through). Clive says it must be the same as the caravan’s original rim.

“If the centre point is further away from the undercarriage than the original, your tyre could be too close to the caravan. And if it is too close to the undercarriage your tyre will stick out beyond the wheel arch. And neither of these situations are good for your caravan or tyres.”

KEEP THE WHEELS TURNING

Clive recommends you rotate your caravan’s wheels at least once a month if it is stationary for long periods at home. Tyres that are stationary for long periods get smooth underneath – this is what causes the knocking sound when you tow for the first time in a long while. In terms of tyre pressure, Clive suggests you must be guided by the recommendation above your caravan’s wheel arch. “For road trailers it’s usually around 2,5 bar, depending on how heavy the load is. The

heavier the trailer, the closer to their maximum tyre pressure you need to pump them.”

DID YOU KNOW?

Everyone knows the earth takes 365¼ days to revolve around the sun. But did you know during that year the earth moves through space at 108 000 km/h on an orbit of 838 million kilometres?

We didn’t think so. Here are some other equations about your wheels to think about.

● **Round and round** The average caravan tyre Jurgens Ci uses is a 195/80 R14 tyre. The tyre has a diameter of 66,7 cm and circumference of 2,095 m. So if you head to a weekend camping site that’s 100 km away, each tyre has completed about 95 000 revolutions by the time you get back home. If someone from Pretoria goes camping at Yzerfontein on the West Coast and takes the shortest route (about 1 500 km), the wheels would each have turned about 1,4 million times by the time you see the Union Buildings again!

● **Choose the inside track.** A 2014 Toyota Fortuner’s wheel track is 1,54 m and it uses 265/65 R17 tyres. The tyres have a diameter of 77,6 cm and a circumference of 2,44 m. If you drove around the block along four straight roads and 90-degree turns, the left-hand tyres have actually turned much more (and therefore travelled a longer distance) than those on the right-hand side. We use the front tyres as the example, because the back tyres follow a shortcut behind the front tyres around a turn. If you theoretically go around the corner with the right-hand tyre a metre from the corner, the right-hand tyre has travelled 1,57 m on that corner and the left-hand one 3,99 m. So if you therefore go around all four corners the left-hand tyres have travelled 15,96 m on the corners and the others 6,28 m. If you consider the distance of all four corners, the Fortuner’s outside front tyre has travelled just more than double the distance once you’ve gone around the block.

● **Keep up, dude.** When you tow a Venter Elite 6 trailer, the wheels complete many



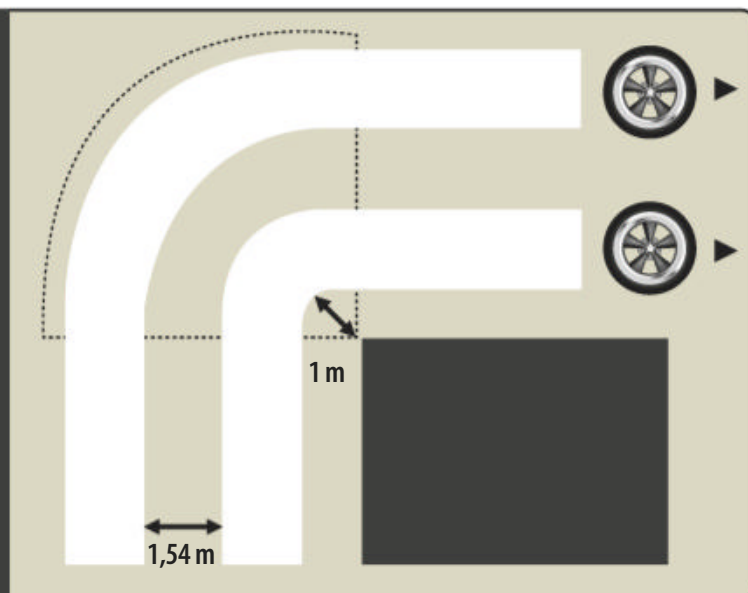
more revolutions over a specific distance than those of a towing vehicle such as the 2014 Ford Everest. The Venter has 155/80 R13 tyres (diameter 57,8 cm and circumference 1,816 m) and the Everest 245/70 R16 tyres (diameter 74,9 cm and circumference 2,353 m). If you've travelled 100 km, the Venter's wheels have turned 55 000 times as opposed to the Everest's 42 000 times. For every time the Everest's wheel makes one revolution the Venter's wheel had to turn 1,3 times to cover the same distance. Therefore the Venter's wheels make 30% more revolutions than those of the Everest. So if you travel 100 km/h and a distance of 1,67 km in a minute, the Everest's wheels turn at 708 rpm and the Venter's at 918 rpm.

If you want to get even more technical: the total movement energy – due to the movement at 100 km/h and the wheel rotation – is about 7 700 Joules. Now imagine the tyre gets detached from the wheel hub and runs along a stretch of road straight up into the sky. It will only come to a standstill at a height of 26 m – that is about seven storeys!



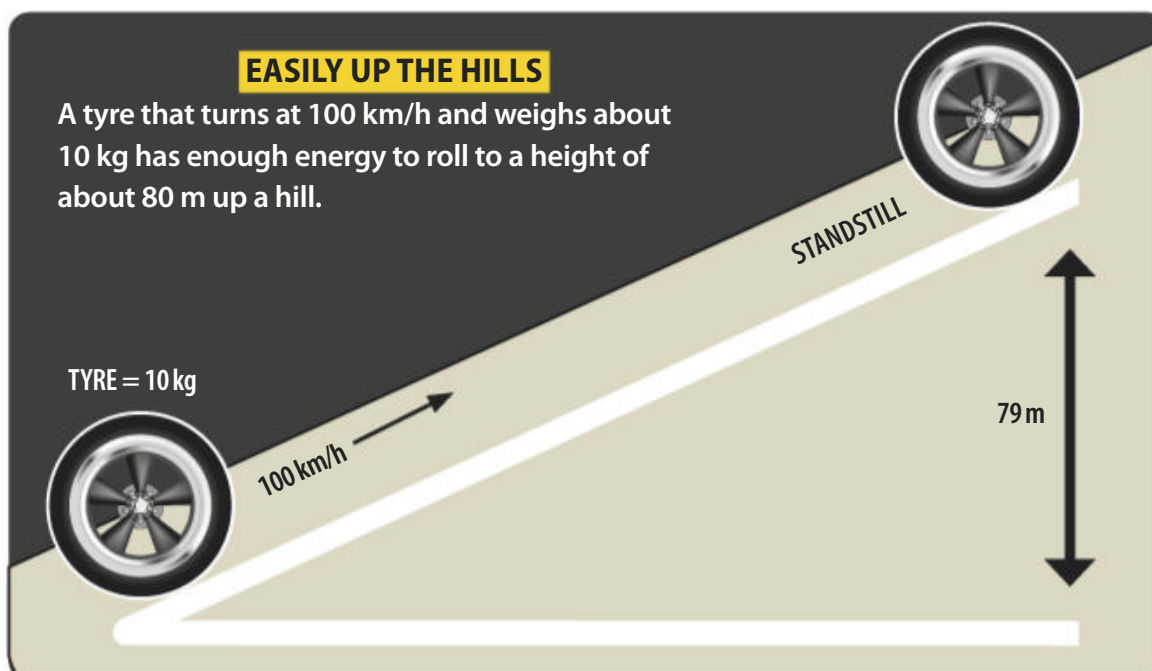
NOT SAME-SAME; DIFFERENT

When you drive clockwise around the block, the left-hand wheels take a longer route than the ones on the right. This means in the case of a 2014 Toyota Fortuner with a wheel alignment of 1,54 m, the wheels on the left have travelled double the distance around the same block.



EASILY UP THE HILLS

A tyre that turns at 100 km/h and weighs about 10 kg has enough energy to roll to a height of about 80 m up a hill.



Towing 101

What should you do if your caravan or trailer starts swaying wildly and yanks your vehicle around? We talk to experts and a few readers about how to deal with this dangerous situation.

There are videos on YouTube showing how swaying caravans get so badly out of control that they not only topple over, but cause their towing vehicles to crash, too. It's one thing if there are no injuries or loss of life, but the news archives are filled with stories about holidays ending tragically due to incidents like these.

go! Drive & Camp readers who narrowly escaped swaying accidents report that you really don't want to be in a towing vehicle when a caravan starts to sway uncontrollably. Johan Naudé from Newcastle wrote on our Facebook page: "It is terrifying... your towing vehicle is yanked around and the rear wheels lift up."

Jan Kruger from Mossel Bay says he was once en route to the Kruger National Park when he experienced such a harrowing ordeal: "It was a case of the tail wagging the dog... All you can do is to lower your speed, try and keep your combination in the right direction and try to get it stable. I ended up in this situation because my caravan's tyre pressure was too low. Since then, I tow with caravan tyres that are inflated with nitrogen – in summer to 3 bar and in winter 3,5 bar. It works for me."

Johan says that after this incident, he changed towing vehicles. His car was too weak for his caravan. "The power and weight

of the towing vehicle has a huge impact on stability."

NEVER BRAKE

What should you do if your caravan starts swaying wildly and yanks your vehicle around?

Caravan and towing experts Hans Koekemoer from Pretoria and Pieter Crous from Cape Town say that Jan did the right thing by reducing his speed and trying everything possible to stabilise his towing combination.

Some people recommend that you should gear down and then accelerate if your caravan starts swaying wildly – but that's the worst advice possible. You should also not brake – it's a death sentence.

Hans says: "Do not brake. Take your feet off those pedals, grip the steering wheel and focus on staying on course. Let the vehicle lose speed on its own."

Pieter confirms this: "Let go of the pedals. Do not brake. Do not accelerate. And maintain control. There isn't much more that you can do. I speak from experience – this has happened to me."

"The only time that you should accelerate a little bit, is if this happens on a rather steep uphill stretch. If it's downhill, you can brake

a little bit – but only a little bit. You should definitely not hit the brakes hard in a situation like this."

DO IT RIGHT

The two towing experts say that by doing a few things right from the start, you can prevent a swaying dilemma from occurring in the first place.

LOCK AND LOAD

If you pack your caravan correctly and the load is distributed proportionally, chances are slim that it will get out of control, says Pieter. "Incorrect loading is probably the main cause for swaying incidents. The problem is that people who tow, load too much weight at the back of the caravan."

Hans agrees. He says the secret of packing a caravan is to remember that the nose weight is the stability weight and the tail weight is the swerve weight. "If you load too much in the tail side, you'll get a pendulum effect. You start from the axle, loading heavier to the front and your nose weight should preferably be around 70 kg. The closer you can get to 100-110 kg, the better."

"When your caravan is hitched, the nose



should point slightly upwards, but once you pull away, it should stand in line with your vehicle. People also make the mistake of packing everything at the back of the caravan when they see the nose is pointing downwards, which leads to van swaying on the road."

THE PRESSURE'S ON

Hans and Pieter say Jan was right to go for 3 bar on his caravan tyres. They do the same and it works.

Tyre pressure that's too low is one of the major causes of caravans that start swaying wildly.

Hans says that modern-day soft-wall tyres absorb some of the shock and transfers weight with sideward sways. But if your tyres aren't properly inflated, these sways are too much and it will cause your caravan to swerve. By opting for 3 bar, you minimise these swaying movements. Also, ensure the one tyre's pressure isn't higher than the other. Such unevenness can also lead to swaying incidents.

Fitting bakkie tyres with hard sidewalls to your caravan for more stability, but then towing it with a vehicle that has low-profile tyres or ones with softer sidewalls, is a mistake. Too much of the rolling motion of the vehicle will then get transferred to the caravan.

Johannes Knipe, the caravan doctor from Cape Town, says that caravan tyres that aren't inflated enough are more likely to burst. That also applies to tyres that still look new because they're not used often, but are actually already kaput. Losing a caravan is a high price to pay for basic negligence.

PAMPER THE BRAKES

Hans says it's a big mistake not to regularly check the brakes of your caravan and towing vehicle.

"If the brakes haven't been adjusted correctly, the brake pads don't apply equal force on all sides, which will cause your caravan to sway. Roadworthiness is incredibly important."

WHAT ABOUT A STABILISER?

Hans says modern-day caravans are built in such a way that they no longer require stabilisers.

"A stabiliser isn't the alpha and the omega

of safe towing, although it does help with the weight distribution and to make your towing combination more stable."

BEWARE THE SUCTION

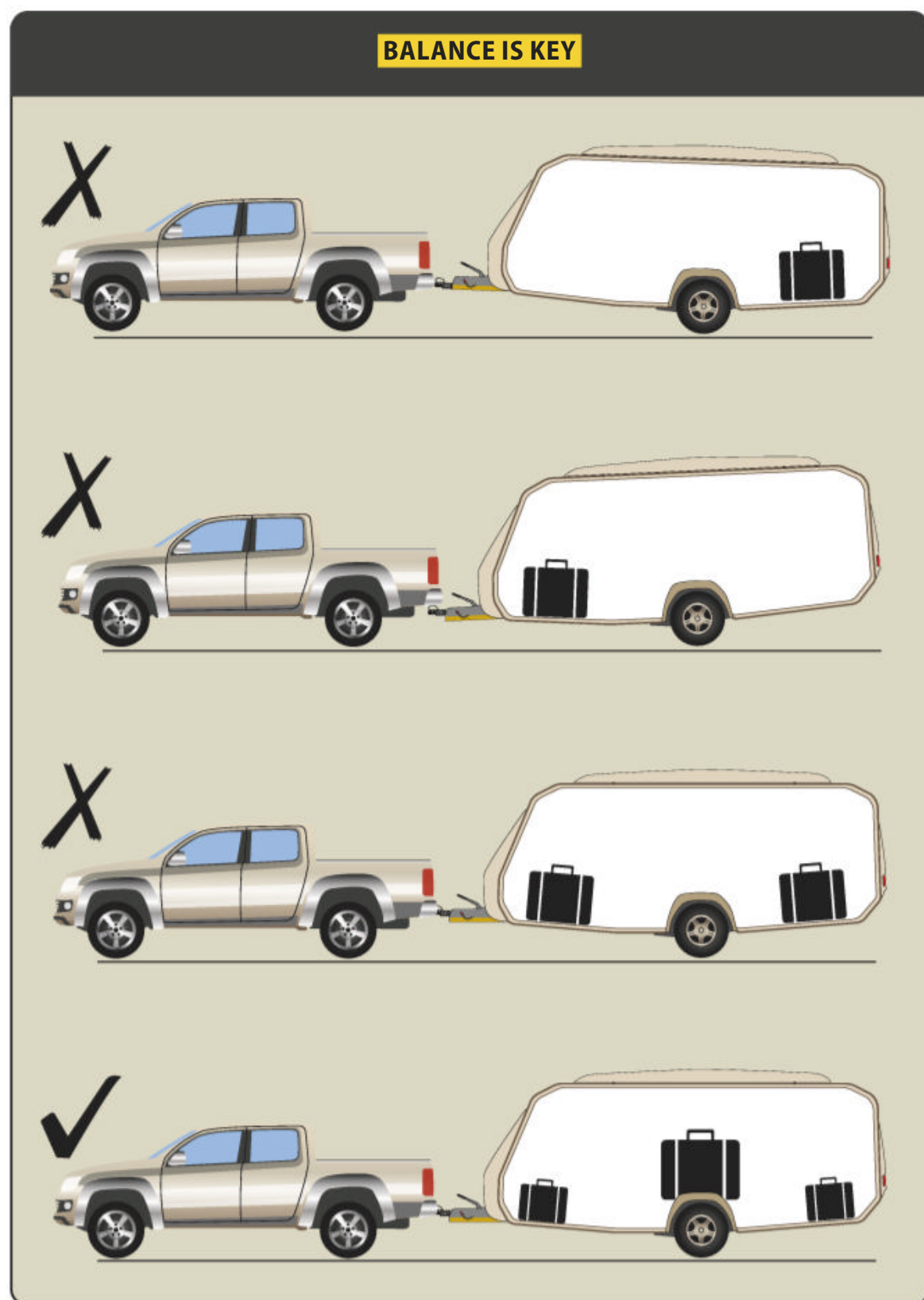
One thing you should never do is to overtake a truck while going downhill at speed, says Hans. "That suction force that you experience when you overtake a truck is stronger on a downhill. That's when people who tow make mistakes. As soon as they feel they're being pulled closer by the force, they try to rectify it, and the caravan starts to sway on the downhill." It is however safe to

overtake while going uphill, he says.

DON'T BE A SPEED FREAK

"It's probably the most important thing about towing," says Hans. "Don't race. It's almost always best to not tow faster than 110 km/h, and then only when it's on the open road and conditions allow it."

"I don't need to tell anyone with experience in towing how rough crosswinds can make a caravan sway. You can't go barrelling down the highway at 140 km while towing a caravan. If you encounter a strong crosswind at that speed, it only spells trouble."



Towing speed

There are those who brag about the way they let fly while towing a caravan, but if you're towing too fast and things go wrong, there will be hell to pay.



TOWING SPEED AND DISTANCE

SCENARIO 1 – EMERGENCY STOP ON A LEVEL STRETCH OF TARRED ROAD

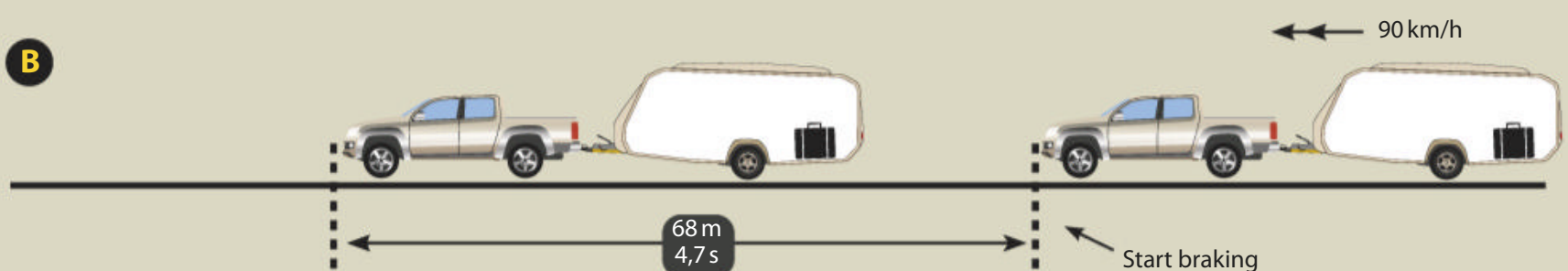
Gently applying brakes intermittently and gearing down carefully must surely be the safest way to bring a towing

combination to a halt. It prevents the caravan from jack-knifing. However, when a kudu suddenly appears out of

the blue or if that lorry that has just overtaken you loses its load, there's nothing you can do but hit the brakes.



If the towing combination is moving along on a straight and level road at 120 km/h and you have to stop unexpectedly, it will take 6 seconds (including the 0,8 second reaction time) to come to a complete halt over a distance of 113 m. This implies that the wheels of the bakkie keep rolling and do not start to skid. If the wheels do lose their grip and skid – which can happen if the bakkie doesn't have an ABS (anti-lock braking system) – it will take 8 seconds and almost 150 m to stop.



If the bakkie towed at 30 km/h less (at 90 km/h), it would still take the driver 4,7 seconds to stop the combination, but over a shorter distance of about 68 m. And if the the wheels lose their grip, the driver could stop after 6,2 seconds within 90 m.

It's inconvenient to lumber along to your holiday destination. You want your camp set up by early afternoon, but when towing a vehicle it is undeniably more dangerous to drive at 120 km/h, especially when the road has bends, when you try to avoid a pothole or when you need to brake sharply. The momentum of a caravan, which in this case pushes your car from behind, or may even pull it to one side, can have disastrous results.

Geoff Elske, former general manager of the AA, reckons that the safest towing speed is 90-100 km/h. This may perhaps seem tedious, but as Geoff says, it's petrifying to see how some caravanners speed at 120 km/h.

"There are quite a number of questions the driver of a towing vehicle must ask him- or herself before hitting the road – things such as whether the caravan is loaded correctly and whether basic components of both vehicles are functioning as they should.

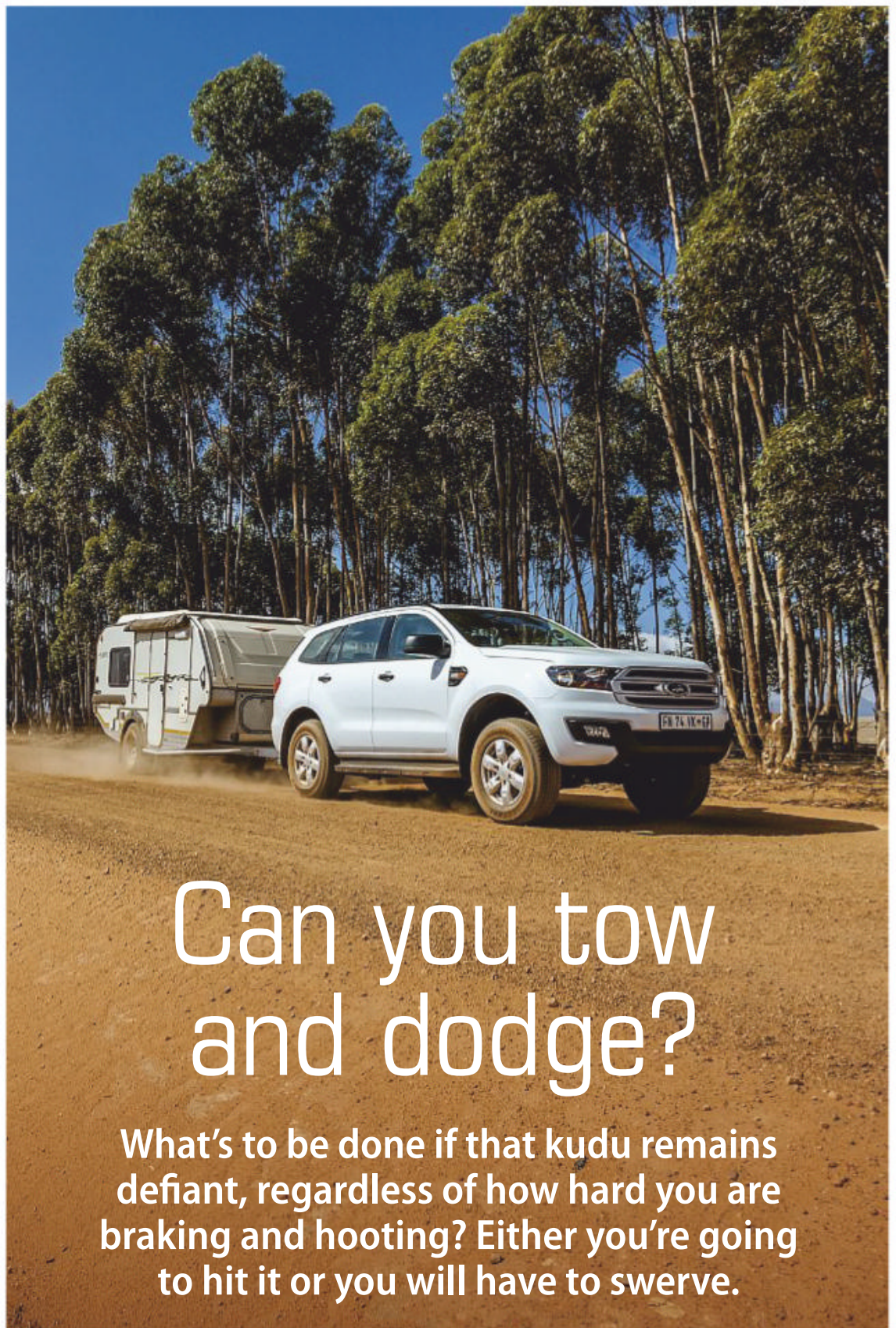
Also remember that a towing combination never handles as easily as a vehicle on its own. This is why it's advisable to double your following distance when towing. Instead of applying the two-second rule, make it four seconds so that there is sufficient space between you and the vehicle ahead if you suddenly need to brake hard."

HERE'S THE EVIDENCE

It is astounding and insightful to see the big difference that a little less speed makes with regard to your towing combination and your ability to brake.

Prof Francois Smit and Dr Marè Cloete of the University of Stellenbosch's Department of Applied Mathematics made a few sums on their pocket calculators to demonstrate the distances needed to stop a typical towing combination in its tracks at different speeds.

For the purpose of this exercise, we used a double-cab bakkie with a tare of 1 900 kg, luggage weighing 200 kg, two occupants weighing 100 kg each (*either you or your brother in law will have to follow a strict diet. – Ed*), and a half-filled fuel tank of 40 kg (thus altogether 2 340 kg) towing a caravan with a tare of 1 120 kg and 100 kg of luggage inside (altogether making up 1 220 kg). Your reaction time is between 0,6 s and 1 s; so we'll work with an average of 0,8 s.



Surely all of us know that the slower you drive, the more control you have over your towing combination... but Francois and Marè demonstrates empirically with a simple calculation how a slower towing speed can make an observable difference when a driver suddenly has to reduce the speed of his towing combination in order to swerve.

For the purpose of this exercise, let's assume that you're driving a double-cab bakkie with a tare weight of 1 900 kg,

luggage that weighs 300 kg, two occupants weighing 100 kg each, and a half-filled fuel tank of 40 kg (this comes to a total of 2 340 kg): In the first test, we hitch a trailer without run-in brakes. The trailer has a tare of 360 kg and it's carrying a load of 390 kg (giving a total of 750 kg).

If this towing combination is driving along a level road at 120 km/h and it has to brake suddenly, it will take 5,3 seconds (including your reaction time) to come to a complete stop over a distance of 101 m. If towed at 90 km/h, it would've taken

TOWING TIPS

SCENARIO 2 – EMERGENCY STOP WHILE GOING DOWNHILL

Once you get to the top of a mountain pass, it's advisable to select a lower gear for the downhill section. This not only automatically prevents you from speeding, but you also don't have to brake as hard and as often to slow the vehicle down or control the towing combination.

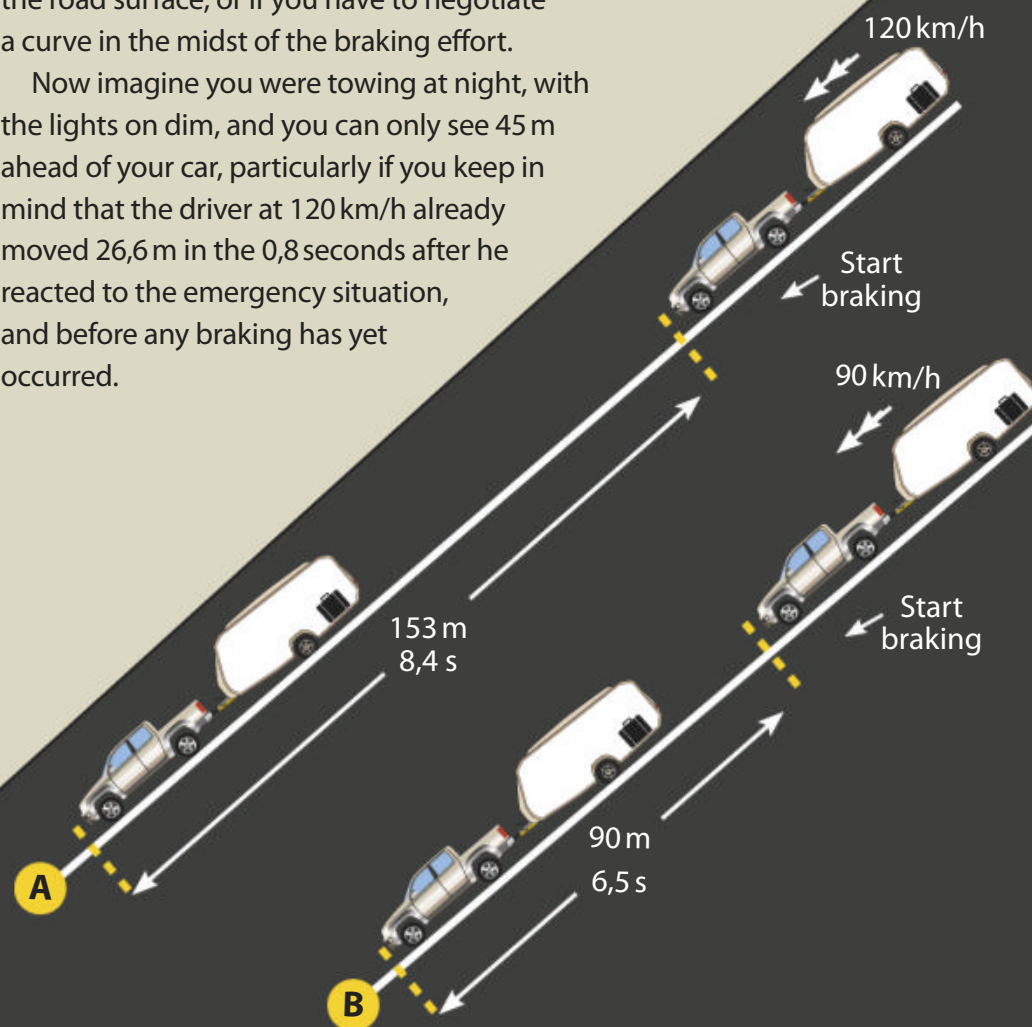
These calculations were made assuming the caravan remains neatly in line with the bakkie without any swaying. However, the caravan can easily roll at such high speeds, especially if the

wheels of the bakkie should hit the edge of the road surface, or if you have to negotiate a curve in the midst of the braking effort.

Now imagine you were towing at night, with the lights on dim, and you can only see 45 m ahead of your car, particularly if you keep in mind that the driver at 120 km/h already moved 26,6 m in the 0,8 seconds after he reacted to the emergency situation, and before any braking has yet occurred.

A If a bakkie and caravan come speeding down a mountain pass with a gradient of 20% (11,3°) at 120 km/h, it will require 8,4 seconds en 153 m for the combination to come to a standstill. Should the tyres lose grip, the time and distance doubles to 13,5 seconds and 238 m.

B At 90 km/h, it still takes 6,5 seconds to stop a bakkie and its caravan, but the distance shrinks to 90 m. With skidding wheels, it will require 140 m and 10,3 seconds to reach a complete stop.



4,2 seconds to come to a stop over a considerably shorter distance.

Now let's suppose we hitch a caravan to the same double-cab bakkie with a tare of 1 120 kg and 100 kg of luggage inside (so a total of 1 220 kg). In this case, you do need overrun brakes for the caravan.

Even though this combination is considerably heavier, the overrun brakes should do their job. If towed at 120 km/h, the bakkie and the caravan can be brought to a halt within 4,2 seconds over 83 m. At 90 km/h, the combination can be brought to a halt after 3,3 seconds and 52 m.

A QUICK DUMMY?

You may believe that you'll be able to brake in an emergency. But what happens if you also have to swerve to avoid hitting something in the road ahead of you? How easy is it for your towing combination to start skidding over the road surface – or even worse – to start toppling over?



"The stability of a vehicle depends on a number of factors. The most important of these is the ratio between the wheel alignment of the towing vehicle and its centre of gravity above the road surface," says Francois. "The centre of gravity is that point where you can assume all of the weight of the vehicle to be centred. The position of this point of course depends on the design of the

vehicle and the way in which you load the luggage into it. For example; the centre of gravity of a car with a roof carrier loaded with heavy luggage moves upwards.

"The static stability factor (SSF) of the vehicle is an indication of its resistance to roll. The static stability is calculated by dividing the width of the wheel alignment by double the height of the centre of gravity. The bigger

this value, the more stable the vehicle will be while moving.

"A typical sedan has a SSF of about 1,4, while that of an SUV is about 1,17 and that of a bakkie is 1,18," explains Francois.

"The SSF serves as an indication of the tendency of a vehicle to fall over when involved in an accident. A vehicle with an SSF of 1,03 or less stands a 40% chance of falling over, while the chance of crashing with an SSF with 1,45 or more is only 10%. The SSF of most towing vehicles ranges from 1,13 to 1,24, so they consequently stand a 20-29% chance of rolling over."

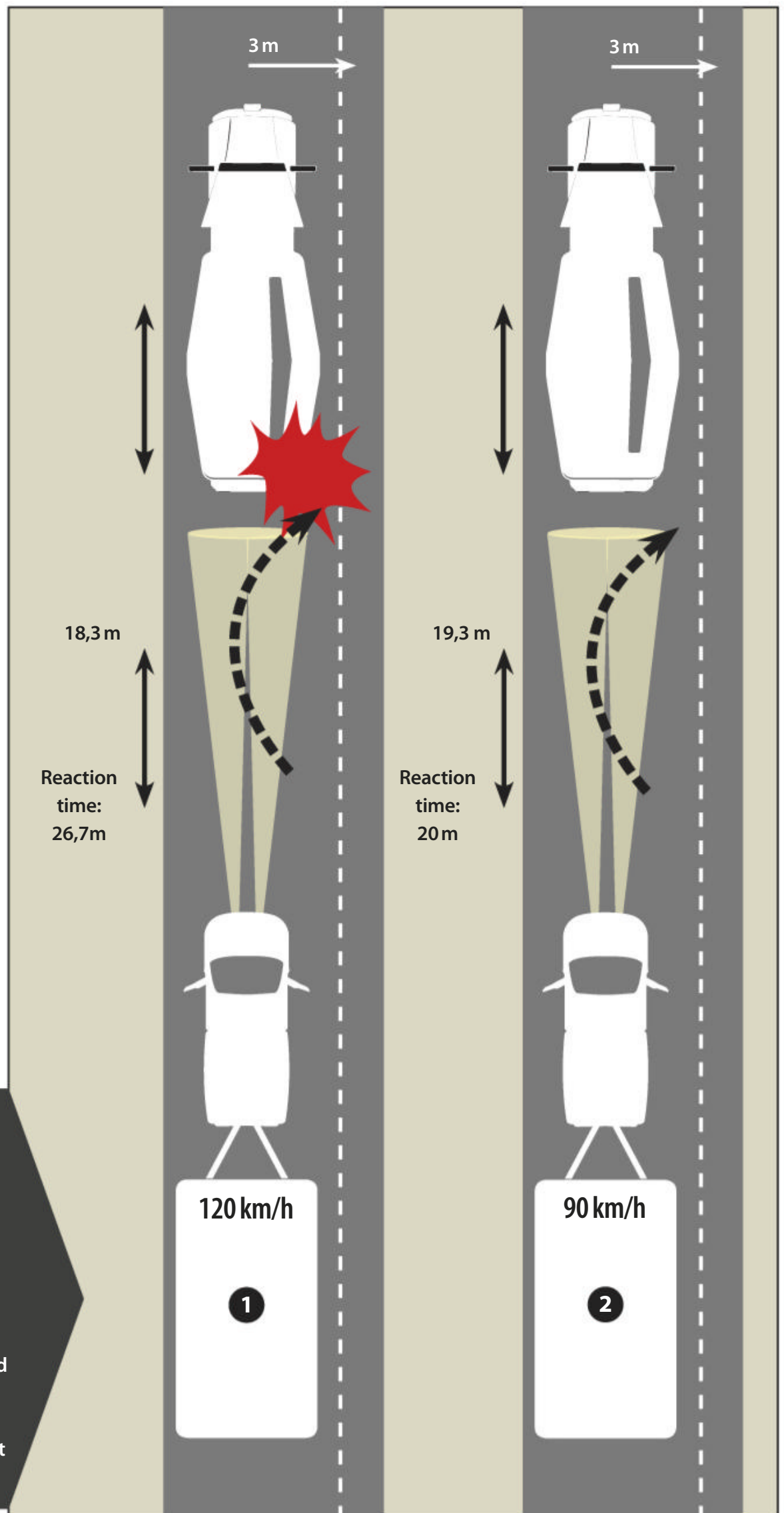
THIS IS HOW THINGS PLAY OUT

Francois made a few more calculations to illustrate how towing speed, in combination with the stability of your towing vehicle and caravan, affect your ability to avoid a collision.

Suppose the headlights of a towing combination with a high average SSF of 1,25 suddenly reveal a stationary truck 45 m ahead in the road. Will there be enough time for the driver towing at 120 km/h to switch lanes successfully (that is, to swerve within 3 m), provided he is able to suddenly turn at a sharp enough angle to allow the towing combination to only just avoid skidding or rolling over? But at 90 km/h, things look better (see illustration).

As you continue to load luggage and other items higher and higher, both in your bakkie and the caravan, the height of the centre of gravity increases and the SSF value decreases. The moment that the SSF value has dropped to below 0,6, it will be impossible to avoid hitting anything that you notice ahead of you in the road – not even at a speed of 90 km/h.

- 1 When a towing combination is moving at 120 km/h, the combination will already have moved ahead 26,7 m within the driver's 0,8 second reaction time. This means you are already 18,3 m from the truck, while you need 25,9 m to swerve out in time. So, it takes you 52,6 m in total to react.
- 2 Suppose the towing combination is moving at 90 km/h, then it will have moved 20 m in the reaction time of 8 seconds and the driver will be able to perform the manoeuvre in 19,3 m – with a leeway of 5,7 m before it will hit the stationary truck.





Rear-view mirrors

The use of rear-view mirrors is part and parcel of towing in the same way that sunshine is synonymous with a seaside holiday.

When you ride a bicycle, it may be best to keep a beady eye on the road ahead, but when you're towing a tonne behind you, you need to see what's happening both in front and behind you. During the K53 test, you have to regularly look into the mirrors. With a large caravan or trailer of any kind, your rear-view mirror is virtually useless and your side mirrors are of little value without towing mirrors.

THIS IS A MUST

Currently, new vehicles must meet a specific

standard of the SABS as far as rear-view mirrors are concerned. This applies to both interior and exterior mirrors. The standard is not specific in respect of the size of the mirrors. It becomes a technical point since it is rather about what you can see behind you.

Also of importance is the measure of distortion that a rear-view mirror can cause: no rear-view mirror must change the picture drastically or completely. We do know, however, that there is a warning on some mirrors stating that objects in the rear-view mirror may seem to be farther away or appear closer than they

actually are from your vehicle.

Modern mirrors – so-called blind-spot mirrors – take things a step further with regard to rearward visibility by showing a section that isn't normally in view.

K53 ANTICS

The K53 test involves dozens of "observations" that require you to keep an eye on the rear-view mirrors all the time. You are required to fully adjust the rear-view mirrors before you drive away. Once you're on your way, you have to look in the mirrors every five to eight seconds.



Furthermore, you have to look in the rear-view mirrors before performing any action, such as gearing down, stopping in traffic, parking or driving through an intersection. The use of mirrors is a critical part of driving. Say, for argument's sake, you're towing in the city for an hour, and in that time you have to look in your rear-view mirrors about 554 times – according to the five-to-eight-seconds principle.

Suppose this is a continuous trip without you having time to stop, and that it takes a second to look in the three rear-view mirrors each time. You will have spent almost half an hour – a full 28 minutes – on looking back!

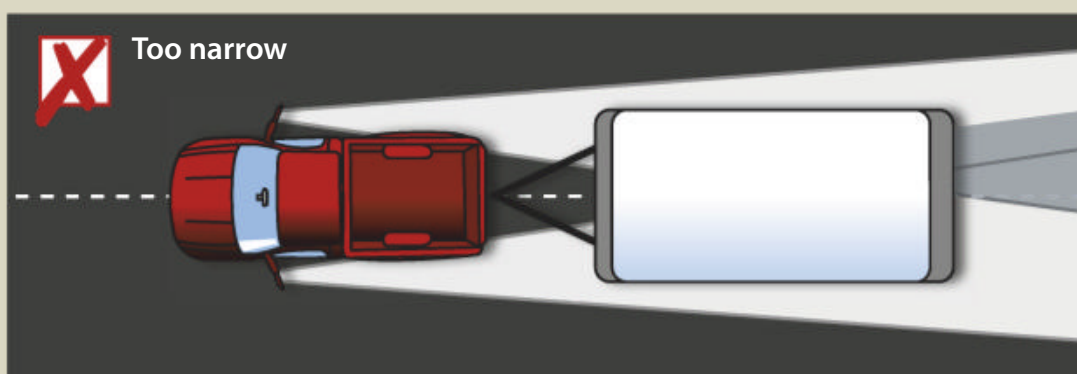
HOW BLIND CAN THAT SPOT BE?

With the mirrors properly adjusted, you shouldn't have much of a blind spot. A simple test is to sit in your parked car and look in the rear-view mirrors while someone walks around

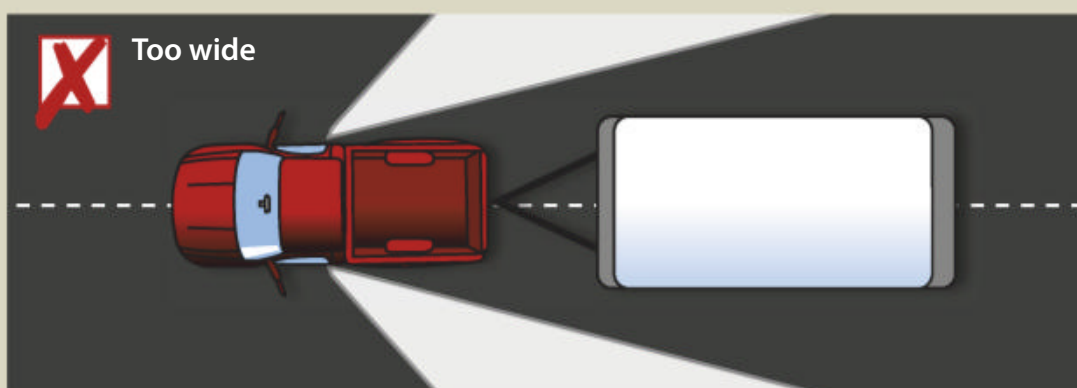
GET YOUR EYE ON THE BALL

Start by adjusting the car's ordinary rear-view mirrors before you hit the road, so that you can clearly see what's happening behind you. (Don't adjust the mirrors while driving.) Adjust all three rear-view mirrors – the ones on the right and left side as well as the one in the middle – so that you have the widest possible view to the back

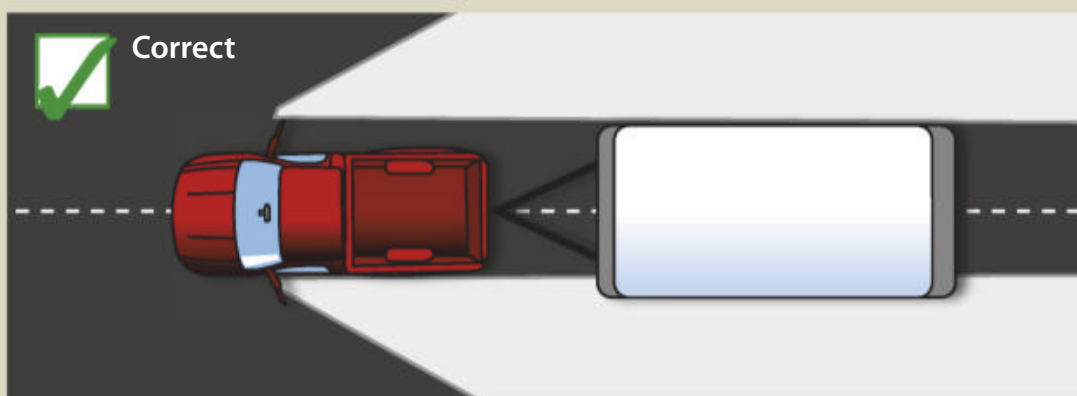
and still limit the blind spots to a minimum. Adjust the side mirrors so that you can barely see the coachwork. If you can see quite a bit of the caravan (or yourself!) in the side mirrors, they're angled too far inward, creating huge blind spots on both sides of your car. The entire rear window must be visible in the inside rear-view mirror.



If you can see a large section of your vehicle and caravan's coachwork in your rear-view mirrors, the mirrors have been angled too far inward and you're going to have large blind spots in your rear view.



If your rear-view mirrors are angled too far outward so that you cannot see any of the vehicle or caravan's coachwork, the mirrors are adjusted too wide.



Adjust the rear-view mirrors so that you can only just not see the coachwork of your vehicle – only the sides of the caravan. Any blind spots are now minimal.

TOWING TIPS

the car. Take note of when and where you cannot see him or her in the mirrors. The two most probable blind spots are on either side of the back of the car – right at the corners and almost vertical to the sides. An effective way to get rid of these spots is to fit some of those small blind-spot mirrors onto the existing mirrors. You can get them from any Midas store. In new cars, the blind-spot function is often incorporated in the mirrors.

WHERE DO THE TOWING MIRRORS FIT IN?

By law, your car must be fitted with rear-view mirrors that offer an unobstructed view of traffic behind you in ‘fair weather’ conditions. Furthermore, legally, if what you are towing is wider than your towing



vehicle, you must fit towing mirrors. People are quite often fined for transgressions in this regard.

If you calculate the average width of three sedans such as a Mercedes-Benz C200, a Subaru Outback and the previous model Volkswagen Jetta, you'll get to 1,79 m. The average width of three caravans – the Jurgens Exclusive, Sprite Splash and Gypsy Romany – is 2,22 m. You could therefore justly say that the average sedan towing vehicle is about 22 cm narrower than the average caravan. You will therefore need to fit towing mirrors.

The average width of bigger bakkies such as the older Toyota Hilux, Nissan Navara and Ford Ranger is 1,95 m. Off-road caravans such as the Conqueror Commander, Echo Kavango or Imagine Comfortline are about just as wide. Legal all the way. (However, if these bakkies tow a road caravan, towing mirrors are still required.)



The general rule of thumb is: the bigger your rear-view mirrors are in relation to the area that they cover, the better. A useful calculation state that for every 3 m that your towing combination is long, your mirror should be 2,5 cm in diameter. A 15 m combination would therefore require a mirror diameter of 12,5 cm.

If you use towing mirrors in addition to your ordinary external rear-view mirrors, you will certainly be able to see well enough behind you. And this includes keeping an eye on the wheels of your caravan as well.

REVERSE DILEMMA

When you can reverse your vehicle by relying on the rear-view mirrors only – without Mom having to impersonate a windmill behind your caravan – then you pass towing on higher grade. Here are a few tips for those who don't yet know the ropes.

First, do a recce. Before you start to reverse, first walk to the space into which you wish to reverse so you can take note of any taps, holes or low branches.

Other right. When you reverse, everything works the opposite way. If you turn the steering from top centre to the right, the back of the vehicle will turn to the right, but the caravan will go to the left.

It takes a while to get used to this and you will have to practice it a few times on a quiet stretch of road before you get the hang of it.

Let the caravan disappear. An easy rule for reversing straight: If you can see your caravan in a side-mirror, turn the steering in the direction of that same mirror and the caravan will return to a straight line.

Hand signs, please. If you reverse with the help of an assistant, he should stand where you can clearly see him in the rear-view mirror on a particular side. It's better for him to point in the direction in which you must reverse than shouting "left" or "right" from way back there. It can be confusing to figure out whether you must turn right or reverse to the right.

DO AS LOT'S WIFE...

Mirrors make things easier, especially when towing, but never solely rely on what you can see in the mirror. Even though you may have made certain that you have a clear view right around your vehicle combo, smaller vehicles such as motorbikes may lie hidden outside the scope of your mirrors.

Glimpse briefly over your shoulder just to make sure one last time. Remember that the vision in a mirror is two-dimensional. Looking back keeps you in check while aiming ahead.



TOWING TIPS



Glimpse briefly over your shoulder just to make sure one last time. Remember that the vision in a mirror is two-dimensional. Looking back keeps you in check

go!
Drive & Camp

Towing Trumps

Ever wondered how the weight of a road caravan compares to an off-road trailer, or a motorhome? Pit these camping rigs against each other with our new **Towing Trumps** cards. The deck of 52 playing cards features vehicles launched between 2014-2018 for players to compare technical specifications.





27%

2014

OffTrax Outplay

It's not every day that you can pick up a fully equipped camper trailer for a little more than R80 000. The OffTrax Outplay costs just under R30 000 without the extras. And on top of that, you can tow it with a regular drivers license.

Length	3,0 m
Width	1,7 m
Height	1,2 m
Tare	340 kg
Loading capacity	410 kg
GVM	750 kg
Price	R85 000



33%

2015

...hard calls it the Scotty. Why Scotty? Brett's Scottish and the people who bought the first had the surname Scott. Brett adds that the that it reminds him of a Scottish terrier.

Length	4,1 m
Width	1,7 m
Height	2,1 m
Tare	420 kg
Loading capacity	330 kg
GVM	750 kg
Price	R75 000



45%

2016

...ly made from aluminium, and the bed – as well call a sleeping capsule – slides out. It has sinks and gas stoves inside and out. It serves as a storage compartment.

Length	5,0 m
Width	1,8 m
Height	2,2 m



45%

2017

...off-road caravan models – the Kavango, the Chobe is not only the newest but it is a good fit for couples, but you could double bed to turn it into a 4-sleeper.



Ry Sleep

Towing Trumps

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