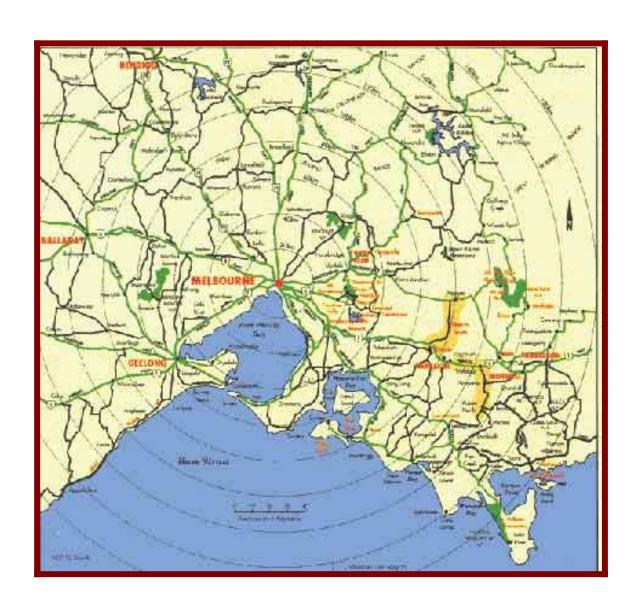
A Short Beginner Transport/Truck Driver's Factfile

In Memory of OLA 712, the Last Truck..?



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Introduction: Writing a Factfile on transport driving could quite easily lead to something as big as a volume of the Encyclopaedia Britannica, so at the outset, the limit of this file extends to a being general introduction to becoming a transport driver, with two main points of interest covered, namely, for the aspiring professional transport operator, firstly, **an appropriate professional mindset** must be developed, and sustained, throughout your career, and important aspects of this mindset are discussed here. Also, detailing of each and every type of transport vehicle, the jobs that they perform and the loads they carry, is not realistically possible, however, **there are characteristics of work and vehicle management** common to all transport vehicles, including loads, and some of these will be listed, but such listings should be regarded as starting-points for further learning and gaining of specific transport driving experience.

No learning is ever finite, and there is always the personal responsibility to continue to enlarge personal knowledge and experience, as there are always new technologies, new types of work, and new skills and standards required to be learnt and updated. This small Factfile is dedicated to the ideal that not everything needs to be found out the hard way, so, with the assumption that the aspiring transport driver already has some years of driving experience in smaller vehicles, what follows are some observations, reflections, and tips that could help build a transport driving knowledge base. However, each driver must also keep learn and keep up-to-date with relevant official Rules and Regulations pertaining to vehicles they drive, as part of their own ongoing professional responsibility.

The author of this Factfile has been driving trucks on and off for 40 years, fortunately without serious mishap, and has seen may changes in that time, along with good and bad memories, near misses, tired eyes, broken sleep, bad back and other exasperations, as well as having worked with good and bad drivers, bosses, and other transport-related personnel. Vehicles driven include cars, tractors and other farm machinery, utes, vans, loaders, fork lifts, tray and canopy trucks, dump trucks, garbage trucks, semi- and truck-and-trailers, with loadings inclusive of general freight and livestock, and also passenger buses. There are others who would have driven a greater range than that, for sure, this to be expected, especially in a full-time professional transport career.

Never a "gun" driver, to be candid, but this driver strove to be, at best, safe, proficient, and machinery friendly. Most of all, various survival skills were learnt and applied, and these, plus a few handy general driving tips, (neither an exhaustive list, note!), are passed on here to any beginner driver who might find them useful, at least to ease their learning workload, and possibly even to aid survival.

Transport driving was always a cross between an interest, a way of seeing a lot of country and interesting places not possible any other way, and, a default career that is now probably over, although someone always seems to need a truck driver at times, even one now somewhat passed his best! Mention is made below of transport/truck-driving as being perhaps regarded as a default career, but this driver soon realised that as default, occasional, part-time, full-time or whatever, this occupation carries much responsibility, and work involved must be done properly, or get out from behind the wheel for good.

"Holiday driving" is an oxymoron anyway, usually applied to drivers of cars, and should not even be mentioned in connection with professional driving, thus, occasional transport drivers should always take their duties just as seriously as the full-time professionals. In other words, there is always some difference in mindset, and experience, between a professional transport driver, and someone else who just happens to have a licence, and when the latter drives, they better have their mind on the job!

Take what you need from this document, and welcome, but do continue to add new information from your own burgeoning experience. To reiterate, the facts and ideas here are from just one "sunset" driver's experiences, there are many other experiences to be had, and skills to learn, plus good, bad, and better drivers to observe, and this will never stop, should never stop. This Factfile is presented here as a small contribution to avoid the necessity to reinvent the wheel so to speak, but that wheel and its spin-offs and refinements will always continue to develop, and the budding career driver must understand this right from the beginning.

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<u>Defining Professional Driver Responsibilities:</u> The first lesson to be learned about driver responsibility for the aspiring transport operator is that the larger and heavier the vehicle you drive, the greater the scope of your personal responsibility, and for the following reasons:

- **1. In comparison to transport vehicles**, smaller vehicles are relatively speedier, smaller, more easily maneuverable, and so much easier to drive, engendering driver attitudes to match, although only with the illusion of safety, in view of car accident statistics, (also, the bigger the vehicle, the more chance of surviving an accident), and,
- 2. The majority of small vehicle drivers will also have little or no experience of heavy vehicles, and what is required of their professional drivers, so you will need to think for them in terms of defensive driving and road safety, even to the extent of actual ad hoc and pre-emptive decision-making at times. Indeed, there is a good case for requiring all non-heavy vehicle drivers to spend some time during their licence training actually driving a heavy vehicle to gain a better perspective of their own personal responsibilities as car drivers when sharing the roads with larger, heavier vehicles.
- 3. Territoriality is innate in primates, and humans, being primates, are no exception, but supposedly we are all capable of overcoming unreasonable expression of this instinct, and nowhere is this more important than when using a public road, that does include as pedestrians and cyclists, whose road skills are also supposedly taught from childhood years. So, do not let the T-instinct overrule your common sense as a transport driver, and do not let those less endowed with common sense spoil your day, or much worse, involve you in an accident.
- 4. Foresee, forebear, and above all be forewarned, because for every type of heavy vehicle you drive there will be a new category of idiot/idiette to watch out for and contend with, either two-legged, two-wheeled, or four-wheeled, from those who are unable to understand why you cannot ride on a road shoulder at will, to those who think it is such fun to cut in suddenly in front of a loaded passenger bus just to see a braking demonstration, and the oh-so-humourous consequences. Volvo Cars, Volvo drivers, and Volvo car advertising, all really do have much in their favour, OK!

General Rule: Paid-up insurance policies do not, and should not, absolve any driver of the responsibility to think, and to keep on thinking, and some truly empathic driver training can only improve driver thinking, and road-use compatibility. In fact, being strapped into a crash rig to find out just how hard vehicles can hit, and spending some time in Accident and Emergency, with a mop and bucket in hand, would be very useful experiences for any prospective licence holder, and for some who already hold one...

You, the transport driver, are driving a large transport vehicle as a profession, instead of just for immediate personal convenience, and, with loads, longer hours at the wheel, plus timetables or itineraries to keep to. Your alertness and fitness must be maintained, plus overall consistent standards of performance, adherence to employer and/or customer logistics, product or goods requirements, ie, overall professional driving standards. You also have professional responsibilities towards employees and clients, and must develop personal working relationships that will facilitate flexibility at different times.

You must develop a rhythm, a routine, a creative feel for your task that will carry you through good days and bad, with minimum disruption of your itinerary, this being not so important for the average motorist less bound by time constraints. Realistically speaking, in all circumstances, you need to be of even disposition, self-disciplined, intelligent, (and prepared to use this intelligence), more defensive than territorial in your attitude to road use, and most importantly, never a big-vehicle bully towards other road users, for safety and courtesy reasons, and for the sake of all other transport drivers.

Most importantly, because of the often solitary nature of the job, moodiness or brooding is an occupational hazard for drivers and operators if the day is not going well, so realize this tendency, and overcome any mood lapses that will affect your professionalism and your judgment. Overcoming this propensity may also save your life, and anyone else's in times of emergency.

The Prime Directive of any transport operator is to finish the day safely, especially for your passengers if you have them, and other road users, and sustained professionalism will do much to ensure this. The well-being of the vehicle, and load, are the next priorities.

You must also develop a sure "road sense" that simultaneously sees both present and possible road scenarios, and you must also develop high-quality instinctive reactions, both for routine and emergency situations. Whatever the signs or markings, whether on freeways, roadways or byways, you are always "driving to conditions", and even familiar roads may have unexpected changes. Especially blessed are those drivers with a sure sense of what dangers may lie beyond the next corner, such as oncoming vehicles or animals on narrow roads, as part of a driving "sixth sense," further supplementing innate driving skills and natural caution.

There is also that important "feel" for the vehicle itself, how it is running and/or holds the road, that only experience can really hone, and so the P-Plater should accept that the limits imposed by this beginner's restriction are for very good reasons, and carefully developing road sense and feel for the vehicle driven are just a couple of examples! All learning involves a development period and time to practice any new skills, and following structured learning, such as for driving, needs time and patience to mentally and physically integrate the new skills.

As these standards are developed with accumulated experience, the learner-driver should not be overconfident, but be patient, and willing to continue to learn. Indeed, **any** driving licence aspirant for **any** form of transport who cannot develop those first two imperative standards of road sense and vehicle "feel", or, is not disposed to further learn in general, should not be so empowered to drive professionally, for all our sakes, and ideally not at all.

Furthermore, on the subject of learning, to forestall slow learning re individual alcohol tolerance, **blood alcohol levels** for all drivers should be set at zero, including for Diplomats and Politician's Offspring, and, profit margins of alcohol outlets should never be a factor in this matter. Hypocrisy should never rule, OK! **The same rule should apply to handheld mobile phones, they have the potential to rival alcohol, and, increasingly nowadays, other misused drugs, as causes of accidents.**

Transport driving/operating is an increasingly demanding occupation that should be upgraded to a specific Trade in the selection and training of professional drivers, and that includes Australia where this is written. A Transport Operator's Trade Ticket, and/or Diploma of Transport Management should be instituted, covering a wider range of heavy vehicles and machinery, all aspects of operation and maintenance, plus selection of suitable career operators with a real feel for their work, and, empathy with the machinery for which they are to be responsible.

Licences should be then be granted as specific skill levels are achieved. Personal costs would also be reduced by centralising training, training would also be more flexible, and learning enabled to be more individually oriented. Experienced drivers would be enabled to attend refresher or advanced courses, learn and mix with their peers, and sit world-recognised tests that would incorporate highest industry standards.

The hit and miss, go-and-work-it-out quasi self-training, or, "operator" as a default occupation so characteristic of previous times, is no longer relevant to the modern world of multiskilling and multitasking, with increasingly complex and costly machinery and its operation, as well as with the demands of clients and other operator responsibilities. **All** aspiring operators should be chosen for, and trained to, their particular operational aptitude, but still gain as wide an operating experience as possible before specializing.

But it is important to reiterate and remember that no driver or operator should be complacent just because a licence is attained, because learning will, and must, continue for the duration of their working life, be it with new machinery or models, differing work environments, job descriptions, or official publications, safety and/or First-Aid revisions. An open and prepared mind, and a controlled ego, may mean, at some stage, the difference between life, death, or serious injury, or, just a plain botched job and loss of reputation and credibility.

While bearing this in mind, the definition of a good driver or operator should also be cast somewhat wider than just speediness or manoeuvring skills, to recognise and commend those who give optimal consideration to the limits of their vehicles, thus prolonging useful working life, and minimising expenses and time lost related to premature wear and tear and part failure, especially the easily preventable.

Only the best drivers in terms of skill, history, temperament and attitude, should ever teach and/or supervise beginner drivers in any area of operations. Perhaps it should be said that it is anyone's right to apply to be tested for a driving or operating licence, but actually gaining, and keeping one, is a privilege that the individual must continue to respect for as long as that licence is held. Good early instruction is the foundation for honing and maintaining good driving or operating skills, and, badly managed aptitude of any degree can lead to overconfidence and folly, traffic accident statistics easily prove this point.

Furthermore, remember that every type of vehicle or mobile plant or machine also has **unique legal, and enforceable, standards** to be met for licensing and operation, and any driver or operator should always know, and observe, these official standards as part of their professional responsibilities. This is ongoing throughout any driver/operator's career, and **such knowledge must be kept up-to-date**.

So, do you still want to be a professional drive/operator? Well, it needs aptitude, application, patience, self-discipline and determination to do well, and there are no shortcuts, so believe this, accept this, and get on with the job if this is your chosen profession, OK!

Meanwhile, **diesel** is the first choice for motive power for heavy transport, and the longevity of the diesel engine is assured, as processed vegetable oils can be used in lieu of petroleum products. This is ironic, as diesel was originally developed to use vegetable oils, the production and use of which was swamped by the then rising petroleum industry, although the working diesel engine itself has thrived to this day in many useful applications. (Ask Google re "**History of Diesel**")

Nowadays, vegetable oils are seen as a viable and cleaner alternative to conventional diesel fuel, so diesel engines have an assured place in transport for the foreseeable future. There are environmental problems of large-scale particulate emission that may even be affecting the albedo of snowfields, as well as global dimming, (that only masks global warming), and general health standards, but, with luck, a diesel exhaust scrubber will be developed to further enhance the use and reputation of these versatile hardworking engines, and their equally hardworking operators.

Combustion engines contribute to greenhouse gas emissions, so hydrogen fuel cell technology may be utilised more and more in the future as R&D into this technology continues, and obtaining hydrogen by passive means such as solar power becomes more practicable. But HFC technology is more likely to be used in urban areas to solve immediate pollution problems by limitation of fossil fuel use, while at the same time, there may be limitations on bulk transport of hydrogen to enable hydrogen availability over long distances, although this may change over time.

However, no matter what form of fuel may be used to power heavy transport of the future, GOOD DRIVERS WILL ALWAYS BE NEEDED!

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A general overview of driving skills, static and dynamic: First of all, some general points directly related to checking overall vehicle condition, maintenance, and load management that will apply to all vehicles you will drive, as these are all part of general driving and maintenance skills that should be learnt as second nature, especially by a professional. Do not forget, too, that aptitude for driving also means honing static skills such as being able to cope with hold-ups and emergencies, your crisis or someone else's, either caused by the vehicle itself, health of the driver, or by some other unforeseen external circumstance.

A constant theme involved with learning to drive any vehicle is cultivation of that "feel" for the vehicle on the road as a dynamic skill, and the fact is that no matter how many hints and tips are taught prior to actually driving, **learning the dynamic** "feel" for any vehicle is a major responsibility for a learner driver. Consequently, train yourself to always ease into your work, be especially observant of your vehicle's performance. **Developing road sense is likewise important** as a dynamic skill, being able to expect and deal with the unexpected, to drive to conditions, and to drive economically in terms of wear and tear, fuel, and time. Your loads may vary, and you may be on constantly changing routes, but your road sense must not falter, and you must also never forget, with true road sense, that **even a familiar road is never an unchanging road,** when you are again near home base.

Easing into your work at the start of the day, or after a stop, allows vital time to settle into your driving rhythm, to reestablish your road sense to cope proficiently with the nature of the road you are on, and just as importantly, sensing performance of the vehicle on the road. Ask yourself, as you drive off, did the engine start readily, were the dials functional and reading true, is the vehicle uneasy on the road, does the steering pull, do the brakes apply evenly, does the motor sound rough?

But wait on, what did your pre-drive maintenance checks tell you, before the engine was even cranked over? Of course, these checks should have been carried out when work began, before you even turned the key to start the engine. As a <u>General Rule</u>, therefore, as a be responsible for doing your basic maintenance checks when starting the working day, and, on extra-long days, find time to do another interim check, OK!

These should include vehicle registration, oil, coolant, hydraulic oil, handbrake, clutch, correct and even tyre pressure and tread, suspension, clean windscreens, mirrors, and side windows, correct seat position and belt adjustments, lights and indicators, parking and running brakes, and any other checks unique to the vehicle you are driving, and/or its load. Then observe the general feel of the vehicle while in motion, through all dynamic aspects of clutch, gear, brake, and steering operation. When the engine is hot, do not remove the radiator cap, but a hand briefly placed on the radiator will give an indication of heat to back up the gauge, and anyway, this is a good opportunity to check radiator and hoses for visible cracks and leaks. If you need help to check lights and indicators, then seek as needed.

Other General Rules: Always ensure that registration is current for any vehicle you drive, especially as roadworthiness is a pre-condition for obtaining heavy transport vehicle registration. If you are not familiar with a vehicle, the first check, before all others, should be to see to see if the registration is current, and if not, do not drive it unless directly to local garage and and/or inspection facilities, which must only be done if a verifiable appointment has been made beforehand.

You may even need a special permit to drive to inspection facilities, or even vehicular transport in some circumstances, much easier and more sensible to keep the vehicle registration current. If a vehicle is not registered, all insurance is void, you as the driver will be primarily liable in the event of an accident, because you should have refused to drive the vehicle, and even if not at fault, lack of registration will be heavily penalised anyway, and you may lose your licence.

Driving skills also should include the wide range of static skills that encompass general maintenance. A poorly maintained vehicle is a serious liability and a travelling hazard, and all drivers should ensure that their vehicles are roadworthy. Even when there is an appointed fleet maintenance officer doing daily checks, if you are to take over from another driver, still do your checks, even if it means parking up somewhere quiet for this purpose. Your dynamic checks should start as you drive off, and experience should be telling you whether the feel of the vehicle on the road is OK, and if not, pull over and do another static check.

If in doubt about the condition of a vehicle after checking, rectify any problem if you can, or, defer on the directive to drive it until the problem is fixed by someone qualified. Give a concise and report of defects if possible. Remember, it is your life, or perhaps someone else's, if a fault in a vehicle you are responsible for as driver causes an accident, and your licence and your pocket too will be compromised whatever happens. If you are an owner-driver, the responsibility is entirely yours. Whatever your status, you should be keeping up your knowledge of legal requirements and standards directives for vehicles, which will also be relevant to static and dynamic checking, and to your own required skill level. So, to reiterate, you should obtain, and keep updated, a copy of the Highway Code or other necessary specifications pertaining to any vehicle you may be required to drive.

Basic vehicle types, descriptions, and maintenance guidelines will, of necessity in this Factfile, be general in nature, the individual must bear responsibility for further self-education on specific models, and any responsible vehicle manager should see that this is facilitated. **But the matter of how you start the day**, with checks, and

observations, including immediately you begin driving on the road, **will be standard procedure for any vehicle you drive**, with particular details relevant to the makes, models, and sizes of vehicles you are responsible for. This must also become second nature for any proficient transport driver.

There are other practical matters related to driving other than just maintenance checks and setting the vehicle in motion:

Loading of Vehicles: Freight management really begins with how you learn to manage freight in your own car, hatchback, ute, or van, be it groceries, shifting house, or carrying passengers and pets, the same principles will apply to progressively larger vehicles and the loads they may carry. The humble ute is a useful vehicle to learn proper freight management, as this can vary from short tray, long tray, wooden or metal deck, with or without headboard, and from pride and joy to knockabout, and all these differences will influence freight loading and management. There will be a transfer of minor skills and awareness of freight handling as other classes of transport vehicles are driven, but these must eventually be upgraded to professional levels to be really effective.

Commonsense professional freight loading management really starts with packaging and labelling, the packing must be good enough to secure and protect the goods, and the nature of the goods should be clearly marked on the package or box. You should not have to consult the paperwork in this regard, and this should be firmly insisted on when dealing with warehouse staff. Your job is to deliver, not to play spot-the-parcel! You must have the best information on all aspects of the load as part of your job responsibility, and this begins with the actual loading. Always be present at loading, or else deputise someone you trust if you cannot be present. Your offsider is ideal, especially if they are already a prospective or relief driver themselves.

Ideally, try to have the heaviest and therefore potentially most inertia-prone cargo forward against the headwall, and successively lighter objects towards the rear. Heavy objects can also be placed over the main axle(s) for stability and well-being of the truck, but brace the load to prevent forward movement. Be careful of height, overhangs, and uneven side loading, and, most importantly, always secure your own ropes, tie- downs, or chains. This is all standard information in any Heavy Vehicle Road Code, and must become second nature in application.

An informal day log or journal is useful to record details, such as special freight details, times, hours, addresses, phone numbers, non-routine matters, etc., and this need not be large, but should be sturdy, and in a folder with pockets or slots for loose papers. Your choice entirely. You will already have a clipboard for freight delivery that carries official or business dockets as well, perhaps a log for long distance hours and miles if this is necessary, even a vehicle log as well. Whatever records you may keep, they should be orderly, relevant, verifiable, and up-to-date.

Freight management will also depend on the category, of course, eg, foodstuffs as dry or wet goods, perhaps cooled or frozen, or building materials, machinery, bulk, hazchem categories, etc. The list goes on, and then there is that most demanding of categories, **general freight**, which as the description implies, could be a bit of everything. To carry such a variety there are flat-decks, decks with sides or gates, tippers, canopies, and also trailers with these same specifications. All will have particular techniques for load management, and these must be learnt, and used with good judgement. At times you may be required to carry live cargo, both livestock and human, with yet another set of specific vehicle management techniques to master.

Freight management should be learnt before serious driving is commenced, so spend time observing other drivers, and if you can, spend time "on the floor" with non-driving staff to learn more about specific freight handling and packing. Being a driver's offsider before serious driving commences is also most advisable, take any opportunity you can get, and do so with an open mind. Likewise, learning a new route, especially a delivery route, is best done as an offsider, you learn the road, making notes if you wish of destinations and freight priorities, and you also have an introduction to clients when accompanying an already familiar driver.

The professional transport driver will always acknowledge that **all** loads will need securing, especially when there is no hard canopy with a closed door. If there is a spill or a breakage within a hard canopy, at least it can be confined. But, professional standards still demand that even if there is a hard canopy, freight should still travel well, so loads should be managed accordingly. With fabric canopies, even with gates, and especially with flat decks, anything goes if the load is not logically packed, and secured. Loads that are potentially toxic or otherwise hazardous must be loaded to specific standards, and you, as driver, must know what these are.

General Rules: Always keep the centre of gravity as low as possible as well, and if a particular loading cannot be made to comply, then drive accordingly. Ensure load stability, because potential momentum and inertia is increased with loading an already heavy vehicle, and that will be felt with braking, possible skidding, manoeuvring, and especially if you have the misfortune to hit something. Never be complacent when loading and driving any heavy vehicle, as your responsibilities and skills must increase with the relative heaviness of the vehicle you are required to drive. Momentum and Inertia Rule, OK, and so does Murphy's Law!

Good quality ropes, ties, tarps, chains, nets, or whatever is current, legal, and truly useful should be on hand, to secure any freight, especially for mixed freight on flat decks. This equipment should be stored in a always-accessible place, such as cab or locker, where a quick check at any time will tell you that everything is present and ready to use. Lay these items out as part of down-time maintenance checks, and be sure you are well-taught as to

how to use and maintain these vital pieces of equipment. Ropes and ties are cheap compared to fines and goods replacement costs, and the general embarrassment of spills and breakages.

You will need to learn proper tying and securing procedures, and even though ropes are being superseded to some extent, they can still be used in addition to newer ties when required. Use common sense when securing loads, but remember that loads move forward, and **any** ties should always be checked several times on journeys, however short or long. To give some examples, the ties that are over the back and also pulling the load slightly forward will usually be the best safeguard of all for full loads; the higher the load, the more this applies, and bale loads are a good example. Several ties are also better than on long one that loops back and forth, being easier to manage, and less likely to catastrophically fail by breakage or loosening.

Hard canopies on vans or trucks are a matter of degree as to size, although they are still utilised in similar ways, so the same principles apply to all. With canopied trucks, partitions, shelves, or wall slats are ideal but not always present. Rubber mats aid traction, and side shelves that slope back to the side walls make working life easier. Within a hard canopy, keep the heaviest freight lowest, because a canopy truck already has some inherent instability due to a raised center of gravity and possible adverse wind resistance when empty, so load accordingly, and do not be complacent.

If you manage a hard canopy with a metal floor, then you must do the best with what you have for load stability, so that planning a delivery means freight and weight will need to be carefully distributed. Driving will always need to be steady, but freight fragility, and what could happen when you open the doors, will mean that commonsense will apply to maintaining load stability. Mats may help, but do not forget to keep them clean, especially if carrying perishables.

Lighter and more fragile goods in hard canopies should always be packed carefully, and a shelving system should help. Otherwise, and **whatever the vehicle**, lights and fragiles should always travel on top of the load or toward the tail, as inertia tends to pull the load forward anyway. **As the deliveries progress**, restacking and reorganising loads should continue, to maintain stability, as well as to ensure logical delivery priorities are maintained. Small, fragile, and/or valuable goods can always travel stowed in the cab if in doubt about their continuing well-being on the journey.

Adverse Driving Conditions, including weather: How you will drive, and even where you go, will also be determined by weather conditions, adding yet another dimension to road conditions and vehicle roadworthiness, not least of which is driver attitude, as all too often, adverse weather conditions are seen as some sort of challenge that less sensible motorists must met by increasing speed and/or risk-taking. This is not a good habit, believe it, especially when licence requirements never included defensive driving training on wet aerodromes or whatever, and even worse, indeed reprehensible, if those who underwent defensive driving training did not learn from the experience. Remember the professional standards always required of you, the heavy transport driver, OK! General Rules:

Adverse weather will alter many aspects of driving, on any road, no matter how wide, new, deserted, cambered, crowned, or otherwise well or poorly engineered, so that **driver mindset must alter to cope with the conditions, and with strong purpose**. Visibility, road-holding, speed, cornering, stability, and overall road feel are affected, be there wind, snow, ice, rain, or combinations of these, on whatever type or condition of road. **Traction is the most likely change**, even in light rain and on sealed roads, for example. There is always a film of grease on a sealed road, especially after a dry spell, and the layer of moisture will make for a slippery surface until the film is more or less removed by prolonged rain.

Light rain can be a blessing on an **unsealed road**, as this keeps down the worst of the dust, even if traction may be even more indifferent, but heavy rain can render these unsealed surfaces very slippery, roadsides soft and unpredictable, and never to be trusted. Any body of water on an unsealed road should be regarded as suspect, as a pot-hole or washout may be present, and never trust the shoulders under any circumstances either. **Sheets of water** left after heavy downpours may introduce an aquaplaning hazard if roads are not well drained, a serious matter for front wheels when steering and braking, potholes and washes may be obscured on any class of road.

Snow affects the outline of the road if heavy enough, and is very dangerous if covering a layer of ice. Sleet is dangerous as it affects traction, especially if freezing on the road surface, and can cause problems, as does snow, with windscreen wipers. Appropriate tyres are needed for these conditions, and snow chains are a must if the snow is too deep for useful road traction. Always take care to travel well clear of the road shoulders in these conditions, and if you need to pull over, select your run-off point extra carefully. **Do think about exposure if you have to work around your vehicle in these conditions,** there should always be an old coat and hat in your kit, preferably waterproof, which you can put on to work outside the cab in adverse weather, though hopefully not at the scene of an accident.

Fog can be a serious problem, with reduced visibility, reduced light, and tricks are played with both sunlight and headlights, depending on the time of day or night. High beam may only make matters worse if you are using lights. Intermittent fog is a hazard because speed must suddenly be reduced as a fog bank is entered, hopefully any other vehicles in the near vicinity are following suite. Condensation may form on mirrors and windows, including inside, and may need manual removal if beyond wiper range outside. (The old bus drivers' trick to counter interior misting of glass is to use a cloth dampened with dilute detergent which acts as a surfactant.)

If you must stop on a highway during a fog, choose well, and get well off the road, and remember that sound will be muffled by fog as well, and you must be careful while on foot around your vehicle, especially if the fog is thick.

Best to stay off crowded freeways in fog if possible, the traffic streams are usually travelling too fast for the conditions, and pile-ups are often big ones. Once again, your judgement, your decision, your responsibility, OK!

Flooded roads, even familiar, should never be trusted. Park up and test conditions on foot, or wait for a suitable vehicle that could act as a scout ahead to enable an informed decision as to whether you can follow. A drowned or bogged truck is an unwelcome extra hazard in these conditions that may block a road completely, with no popularity prize awarded to the luckless driver, OK!

Never trust a road shoulder under any condition, unless it is obvious that a proper foundation has been laid for safe departure from the road, and, the heavier the vehicle, the more important this rule becomes. If confronted or overtaken by a smaller vehicle on a very narrow road, stop, and let them work their way around you, a heavy vehicle should never leave the crown if there is no obvious wayside area to move onto. In general, stay close to the crown when in motion, that is the only place where your roadholding is assured, and two large vehicles passing on a narrow road should be a matter of mutual courtesy and careful manoeuvring rather than bluff, OK! Remember the extra meter allowance for mutual mirrors, or you will be driving on "one-eyed", and very uneasily until repairs are made.

Gravel roads offer less resistance to revolving wheels than standard highway seal at any speed, but even if the load on your engine is less, and the "feel" of the road seems easier, be aware of creeping speed, and the fact that you will have less braking power, and higher possibility of skidding with sudden braking. That floating feeling, especially on a good gravel road, is seductive, but maintaining vehicle control on gravel is most important, so constant vigilance and attention to speed and road conditions on gravel must not be relaxed, even with no or little traffic. Also, any dampness on a gravel road certainly will keep down the dust, but never rely on the possible illusion of initial improved traction either, the dampness may only be on the surface. Once again, never trust the road shoulders, wet or dry, OK!

<u>Specific Rule</u>: Never take for granted any road surface in adverse conditions, whether familiar or not, especially if the surface is in anyway obscured such as by any water to any degree. That smallish puddle may obscure a pothole that could damage suspension, or even cause your rollover, and even death, at speed.

If you are being hassled by a faster vehicle in adverse conditions, let them pass, they are a danger to you while in your vicinity, and a danger to anyone in any vicinity. Better to stop further down the road for an accident involving a bad driver, than be involved in an accident with, or because of one!

Other adverse conditions may involve an altered road surface, such as new seal, gravel, or the results of flooding that can leave mud and/or debris, vehicle spills, accident debris, or whatever, on a road, so just slow down, and be prepared to stop if need be. **Commonsense Rules, OK!**

Livestock and wildlife on roads are common in rural areas. Slow down well in advance when confronted by either, assume unpredictability in both cases, which is another reason for lower road speed, especially at night. Specific Rule: On any road with changing visibility, 70 kms/45 mph will usually allow either adequate slowing time, or fleeing time, respectively, to contend with animal hazards, and if contact is made, there will be less likelihood of a serious crash.

Sometimes wildlife will make a sudden dash as you come alongside, you will need time to swerve, and braking traction may suddenly fail on a gravel road, also without warning, so a slower speed will make the difference for you and the animal. Their instinct is to flee if a "clear" space is seen, even into danger as well as away from it, and your thinking response is to always anticipate this action. Your judgement, your decision, your responsibility, OK!

Specific Rule: Always remember to stay in your vehicle before or during thunder storms, because, either driving or stationary, your vehicle shell is your best protection, as long as you remain still, and not touching anything conductive such as a metal door handle. Pull over well before a storm covers you, and do not park beside tall trees or anything else that may topple if struck, and you will be safe.

Do not park in hollows, at or in watercourse fords, or even on bridges unless they are higher than their surroundings, any of which may be subject to flash floods or landslides. **Be sure the storm has passed before proceeding,** and, unless you have excellent road visibility, always expect road hazards ahead, whether debris, vehicles, washouts, damaged bridges, or whatever, so again, **drive to conditions**.

Night Driving: needs alertness, good night vision, patience, and, all of these apply to adverse conditions that may be also experienced with any night driving. If you do not drive well at night, then avoid doing so wherever possible, especially in wet conditions, when reflections, rain, mist, shadows, etc., can really play optical tricks. Judging distance at night is more difficult, as is judging speed, yours or other vehicles, and overtaking, or being overtaken, can be hazardous if carelessly undertaken.

Leave extra space when following at night, and let faster vehicles pass whenever a safe opportunity allows. If you move at speed in columns of traffic, even on good roads, then you must be extra vigilant. Overtaking and passing conditions, as stated, are made more difficult as well, so make careful decisions, or slow down, or even take a break, there is always another day ahead. **Dawn and dusk** are also difficult times for visibility, and these conditions may also change in relation to your timetable, with seasons and daylight saving, so take care. As long as vehicles have lights, then you will be able to see them, and **make sure you are also well lit up so you can also be seen.**

Also in relation to being visible, for large vehicles, if you must stop for a breakdown or puncture, beacons may be required to be placed ahead and beyond the rear of the vehicle, as well as having the existing park and side lights, although the battery will need periodic spells of charge, that is, as long as the motor is serviceable, anyway. If you travel at night, and your vehicle warrants beacons for breakdown visibility, then you should carry them.

The worst problem in poor light conditions is seeing vehicles with deep, dull colours not having their lights switched on, and it has been well-known for a long time that certain colours on vehicles are harder too see, especially in poor light, and it really is time to review the colours that can safely be most used in such conditions to ensure optimum vehicle visibility at the time. Meanwhile, you just have to be vigilant in this matter of vehicle colour v. visibility until commonsense prevails.

Peak-time driving at dusk, night, or dawn, is best avoided if your itinerary can accommodate this, if not, then take extra care. Night driving may also mean battling your body clock, as well as the extra concentration demands, so use your common sense, rest as you need, or sleep when you must, there is no point in being dead on time, as the saying goes. Accept your vehicle's and your own limitations gracefully, in these, or any other adverse conditions, if you are a true professional

Maintenance: An important overall static skill, and major responsibility for ensuring vehicle well-being and safety. Your on-road equipment should include the maintenance basics for all vehicles, even as for the family car that you probably learnt to drive on, namely, spare wheel(s), jack, wheel-brace, blocks/wedges, basic tools, spare belts, tape, oils and water and/or coolant in **robust** containers, air pump, puncture kit, etc. If the vehicle is not your own, even if you drive it on a regular basis, contrive a portable kit of essentials that is always with you, especially in remote areas, in case of a breakdown. First Aid, food and water, mobile phone or CB, and protective clothing may all be part of this back-up.

General Rules: Luck is never a dependable vehicle spare part, only planning, ongoing checks and maintenance and good driving with good "vehicle sense" will enable optimally trouble-free vehicle use.

Climate is an important factor in regard to choice of oils, coolant, clean fuel, and general maintenance of system integrity. Tyre pressures will change, coolant and lubricating oils may be different, and grades of oils will vary due to climate, hotter climates will have thinner grades, and vice versa. Coolant is usually used nowadays in trucks, vital for high-performance motors that may also have alloys sharing the cooling system, so never dilute coolant with water if you can help it, always carry spare coolant in a robust container, and allow for coolant expansion when topping up. Coolant can be damaged by reaction with common water constituents, with predictable results if left unchanged.

Never mix coolant types, and always flush systems thoroughly with fresh tank or de-mineralised water before adding new coolant, and this should be at least yearly. If hoses and radiator are kept in good condition, then only minor topping-up of coolant will needed between yearly cooling system flushings.

Coolant should also include anti-freeze properties where this is needed, but if you ever suspect ice has formed in the cooling system, do not start up until you are sure that it has all thawed, or risk serious damage. Check the frost plugs for damage as well. In hotter climates, regularly check cooling system hoses for cracks or leaks, frost plugs for corrosion, and note that a loosened radiator cap will reduce pressure, and thus boiling point, and may be enough to get you home for proper repairs if a leak that develops is not too severe. In cool temperatures, start-tup pre-heating and/or ether may be required.

<u>Specific Rule:</u> Ether must only be squirted into the air intake of a <u>cranking</u> diesel motor, never <u>before</u> <u>cranking</u> begins, or again risk serious damage, including leaching of engine oil from piston walls. Find out if start-up pre-heating is required for any diesel vehicle you drive, and, learn how to activate this.

Wetter, and especially hotter and wetter, climates will mean regular system testing is important so that moving parts are always kept free, especially brakes and clutches if hydraulic. Air tanks will require more frequent draining in humid conditions as well. Clean air is important for healthy engines, as is clean fuel, so these filters must be serviced regularly, and maintain clean engine oil by strict adherence to service schedules. Microbes can grow in diesel fuel, especially in tropical conditions, so if you are unsure of fuel that you are using, consider an additive which will inhibit or kill these organisms if present. Electrical circuits will also need checking regularly in damp conditions, including during, or after, any off-season or storage periods.

Batteries can also be adversely affected by heat and cold, and acid strength may need adjusting for long periods in climatic extremes. Cold will make any battery more sluggish, unless a reasonable operating temperature can be maintained. Prolonged heat can drastically shorten battery life due to enhanced acid potential, even as the

battery seems more lively. Always keep connections clean, and in good repair. (See **Home Solar Power Management & Why**, PDF Index Page on the **Nofrillstech** site, for information on SLI/FLA/GEL battery management, including the **Standard Battery Management Wallchart.)**

You will also need to check due maintenance dates, and to keep notes of vehicle condition, especially of running notes, for the workshop maintenance mechanic to refer to, this is your responsibility as you are the one who is driving. If you can, spend time with the mechanic to learn about maintenance in general, and "your" vehicle in particular. On some jobs, you will be responsible for all truck maintenance yourself as part of your duties, so best get used to this.

Mechanics really do appreciate those drivers who take an interest in the vehicle they are driving, because this may save time, money, and workshop labour down the line, so consult, and do not be too proud or shy in these matters, OK! For example, never mix oil types or even brands if you can avoid this, unless you have an OK from a mechanic. Even better, **spend some time in a mechanics' workshop as an offsider** or observer to gain more valuable vehicle knowledge, and empathy for mechanics' duties, especially when/if trucks are mistreated by poor drivers.

Windscreens should be clean, plus all side and back windows, and wipers must always be functional, there can be no doubt about this.

If you do not like to keep your windscreen clean, and diligently so, then you may be better off not driving trucks, for obvious reasons. Have cleaning gear always to hand, and do not forget the inside of windows, either, because "road film" will build up, and should be removed, at least weekly, The outside of windows should be kept clean whenever this is needed, however. Mirrors likewise, and all head, tail and sidelights should be kept clean so that you can see and be seen when conditions require this. Remember the bus-drivers' trick mentioned for dewpoint and misting problems.

A broken windscreen is a nuisance, but on a fine day, at a reasonable speed, a pressurised pocket of air will build up in the cab if the side windows are closed, so that conditions are at least bearable until repairs can be made. You might as well remove all of the broken glass before driving off, as bits and shards can work loose, and anyway, modern glass shatters into complete opacity that obscures visibility.

Remember that if you are on your own on long journeys, especially off the beaten track, then maintenance and troubleshooting are up to you, so put in the work to get these things right. All backups and spare parts, including spare tyres and wheels, must suit the truck you will be driving, so check, check, OK!

Tyres and wheels: There are various **General Rules** to do with tyres and wheels, these are highlighted as necessary. Firstly, always have new tyres on the front, and retreads, if there is no choice but to use them, on the rear wheels. Retreading of tyres is advisable only on tyres of known history, or else purchase good secondhand tyres. Tyres must be the same type, and evenly matched as to tread and wear, especially on the front, which also may have special "steer" treads that must match on both wheels. Tubes are necessary if there are problems with maintaining tyre pressure also of tubeless tyres, this may be due to the wheel or tyre bead as well as a slow puncture leak.

Having a sound surfaces under any vehicle parked for anything more than a short time is advisable, as there may be an unforeseen need to change a wheel. However, if a flat tyre develops, a heavy vehicle is better left in situ rather than struggling to move when cold, and hampered by a flat tyre that may not always be on a dual wheel, especially if it is on a front wheel. Apart from which, unnecessary movement on a flat tyre should be avoided to prevent damage, and if such movement is the result of a long pull-up when travelling on the open road, or perhaps a very necessary change of position for safety reasons, get a tyre specialist to check the condition, in case the tyre should be condemned.

Be sure to carry spares on long journeys, as well as spare tyres and/or wheels, where you will be on your own resources. A DC air pump is useful, but best used with the vehicle motor running to maintain battery charge. A hand pump is a last resort, but still worth having. How many punctures you repair on the road will depend on how many complete spares wheels you carry, or how comprehensive you repair kit, but in these days of compressed air machines.......?

Note that the kick test really does work, given that you have standard pressures recently checked. The rebound, as well as the resonance, will soon indicate a tyre that needs attention, although all pressures should be tested at least weekly, especially in summer, and testing is best carried out when tyres are cool for a truer reading. Winter will mean harder tyres and denser air, so test when tyres are warmer, and make allowances for sudden warming of temperatures that will increase pressure suddenly. Some vehicles and their steering and suspension are more sensitive to tyre pressure than others, once again, all down to the "feel" of the vehicle on the road, as well as the road type and surface you will travel on, and the load you will carry.

The most relevant tyre pressure is really that relating to operating temperature, so testing tyre pressures after work has begun will give a truer reading in relation to the loads you are carrying, and the roads you are on,

regardless of climate. Remember that in very hot conditions, tyre pressures can climb very high, so be sure that your starting pressures are within reasonable limits. Always seek the advice of a qualified tyre specialist if in doubt.

Wheels need balancing, so any vibration attributable to wheel imbalance should be checked out, especially front wheels. If you repair a puncture or replace a tube, be sure to mark the position of the counterweights and band on both tyre and rim for reassembly, and any new match of tyre and wheel must be properly balanced from the start, or as soon as possible. Vibration due to imbalance will affect tread and bearing wear, also steering ability if on the front, and will be a cause of irritation to you as the driver, as well as obscuring other vital dynamic signs of vehicle well-being that you should not miss.

Steering that is out of alignment must be corrected to avoid tyre wear, as well as sideways drift, although wheel or tyre changes can cause slight drift that should disappear, given that the original steering setting was correct. This "tread bias" on front wheels will need some forbearance, but should be soon self-correcting, although extra vigilance and steering control is always needed even with just a slight tendency to drift. Note that tyres with boots in them should never be on the front wheels, and need proper balancing before being placed elsewhere, too, or else they cause vibration that will increase with speed due to the distortion, and also extra warming of the tyre due to the consequent hammering effect as the wheels turn.

Get into the habit of stepping back from the truck while on foot to view tyre symmetry and circumference, especially if a vibration is developing, there may be a section of tread lifting. Forestalling a blowout is better than dealing with one that will occur without warning, usually at speed. Tread unravelling and flying off a wheel is a serious hazard for other vehicles, needing to be removed from the road after landing anyway, so pre-emptive tyre condition checks are never wasted time, OK!

Also, a hand laid on each tyre during a driving break will soon identify any tyre that is warming markedly because of stress. Tyres/wheels of markedly different circumference should never be twinned because of unequal weight distribution, nor should one be opposing a smaller circumference wheel on single wheel drives, as this will overwork the transmission. Always match tyre circumferences carefully, even on a trailer, as tyre stress will eventually lead to a blow-out, and more work at the roadside. Bruising tyres on curbs or other obstructions will weaken walls, so be very careful of this occurring, especially with front wheels. Larger vehicles will begin to scuff tyre treads that cannot not follow within a turning circle, tyres on double axles wheels being the obvious example. So, try to maintain wider turns and gradual position changes, especially if tight manoeuvring on hard seal is undertaken.

When blowouts or punctures do occur, (hopefully never on front wheels!), take care where you pull over, remember road shoulders and visibility are important, traffic markers or portable signs may need to be part of your kit when driving a very large or long vehicle. If your load is not great, and you slow right down, you may be able to nurse a truck some distance to a more ideal run-off spot, or even to a nearby service centre, if just one of a set of dual wheels is affected. Speed means a greater rate of tyre wall flexing, so slower speed will drastically reduce heat build-up within the sound tyre remaining. But, exercise care and judgement, and do not try this if fully loaded, and/or if roads are very busy, for obvious reasons.

Because of heat build-up due to flexing, higher speeds while fully loaded are more likely to cause a blow-out in a faulty tyre, so night travel in hot climates can be an advantage, also for fuel consumption too, as denser air means better combustion. If your tyres are not so young, even if quite serviceable, remember what the effects of heat and tyre stress can do to cause blowouts, so plan your travel time, and average speed accordingly, a useful tip, OK!

In these days of larger vehicles and compressed air machines, calling for help may be easier than trying to change wheels on the road, especially with inside duals affected, but, if you are forced to be independent due to clock time, or distance, then you just grit your teeth, and get on with it. Thus, any time spent learning in a tyre shop is valuable, so without going into further detail here, the firm recommendation is made that you spend time in a tyre workshop, same as for a mechanics' workshop, to watch, ask, and learn, because you will need that experience, and believe it, OK!

Gravel roads are better traversed for long distances with slightly less than maximum tyre pressures to ease the suspension and aid traction. The advent of radials has also made such travel easier for driver and vehicle, but be aware that wider than specified tyres and wheels have the effect of limiting traction on roads, especially gravel, and/or wet roads, as well as being unnecessarily expensive. To take any advantage of traction of such wheels, extra weight should be added, which may also exceed vehicle specifications, and alter handling capabilities as speed increases.

Another common customer specification alteration is the steering wheel, most likely from larger to smaller, and conversely, smaller steering wheels require more effort to turn, and may slip from the driver's grip in adverse conditions or **emergencies such as front tyre blowouts**. Remember that power steering is a hydraulic system that can be subject to breakdown just as any other similar system, so at that breakdown point, a standard steering wheel is a blessing for the extra mechanical advantage conferred by its greater circumference. This sort of custom modification is more likely to involve smaller vehicles rather than trucks, but is unwise at any time.

General Rule: Altering vehicle specifications of any kind is for experts, and may require a mechanical engineering Inspector's Clearance, so consult before any such alterations are made, to save expense, and most probably your life and/or someone else's. Note that "specifications" also include weight-carrying limits, and the penalty for exceeding them, or, for carrying unsafe loads in general, is very harsh, and rightly so.

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Basic descriptions of vehicle types that you may be required to drive: The assumption is that you already can drive, even to the point of some time spent in paid transport employment, so the following are general descriptions that may be useful, relevant to the particular class of vehicle you expect to drive, at present or in the future.

The Delivery Van: The first vehicle that the budding transport driver will be appointed to drive is most likely the delivery van, and there are important safety points to note that are unique to this ubiquitous delivery workhorse:

The van these days is most likely to have rear springs and independent front suspension, cab over wheels, recessed engine bay, small mirrors, sliding doors at the side as well as hatchback rear door, radial tyres, initially high center of gravity even before loading, high wind resistance, especially side on, all of which features contribute to the need for care when working with these vehicles.

Firstly, because the suspension is mixed, the vehicle needs weight to attain real road worthiness while driving due to the difference in road-holding effects of springs and independent front suspension, and also that higher centre of gravity. Loading helps to stabilise the vehicle, and smooth the ride, although the resulting ride will vary according to the load, the road conditions, tyre type and pressure, and the make or model of the van.

General Rules: Load to carrying capability, keep the centre of gravity low if possible, secure the load, and always drive to conditions. These driving parameters are important for any transport vehicle, so learn them early on in your career.

Mirrors on vans are usually small, set low to the road, (compared to truck mirrors), do not project very far out, and do not have any height advantage (as truck mirrors do), so there is always the risk of catching them on some wayside obstruction, or other vehicle projection, if manoeuvring or parking without due care. Remember that blind spots will be a problem in a van, and for early side-mirror drill, practice remembering vehicles which may temporarily disappear from view either when following, or passing you, and vice versa, and noting when and where they may reappear within your range of vision.

Blind spots are possible with all vehicles, but more so with small mirrors set closer to the road on low vehicles that do not have rear window visibility due to load, or even due to construction characteristics. Vans and trucks have similar canopies, with similar visibility problems to compensate for, and the lack of the better perspective that a truck has, with cab elevation and larger, higher mirrors, make blind side observation in vans more difficult, and thus the practice of **maintaining adequate blind side road clearance** even more important. So be aware of this.

There is a general tendency for beginner van drivers, in particular, to travel too close to the edge of the road on their blind side, but all that is needed to overcome this is to ensure that you are well placed on the **driver's** side in relation to the middle of the road, and the blind side will travel well. **Cringing away from oncoming traffic is a bad habit that must never become ingrained.** Proper road travel positioning is a habit that should be learnt by all young drivers, and another strong argument for learner drivers polishing their skills at a driving school, under the care of an objective professional, before sitting for their P-plater licence.

Some manoeuvring practiced in a quiet location with witches hats or similar will also help with learning van dimensions, plus, learning to park with allowances for swinging back doors, or side access through sliding doors are also useful early lessons. Modern vans can range in size to quite large and heavy these days, so be sure that you are ready to drive solo any size van that you may be required to, or else get the practice you need before the exigencies of the open road find your van-driving skills wanting, OK!

Van management should be well-mastered, and, combined with ute management, both are the foundation of future heavier vehicle management.

Some other <u>General Rules</u> applicable to any transport vehicle are as follows: Security of your vehicle and its load will always be important throughout your career, so practice proper parking and locking procedures from the outset whenever you judge these to be necessary. Also, part of vehicle security is the safety aspect of proper parking, which infers no problems will be involved with stopping there, or, being able to start up and drive off. But you must still check around the vehicle before starting up and driving off, and look for obstacles, animals, pedestrians, or whatever, and this may only necessitate a glance either side of the vehicle before going forward, but should involve a proper check to the back if intending to reverse. Your load should always have regular visual checks just for stability, especially if not confined within a canopy, so get used to this sort of regular observation also.

Specific Rule: Never start any vehicle with high revs and then drop the clutch immediately after, this is bad for engine oil circulation, clutch health, possible air pressure lags, or safe mirror checking, and, there is no time for the warning sound of a starting motor to register with anything or anybody live near the vehicle needing this warning to get out of the way before you move off.

Routinely take the time to observe the lie of a parked vehicle that could indicate suspension problems, or even a puncture that has been developing unbeknownst to you. Such problems may be easily identifiable if you allow time to see them, so get into this habit, as another static driving skill, of taking some time to observe the outward

appearance of a stationary vehicle as you go about aspects of your job on foot, you never know what may need attention, and be better fixed then and there, "on the spot", rather than after having to pull off a busy road.

Rushing and racing starts are not the trademarks of the professional driver, but deliberate and considered management of the vehicle definitely are. Even when time is tight, just keep to an optimum pace, because a problem caused by haste is only increased by further loss of time needed to solve it, especially when breakages or contact with another vehicle or even a pedestrian is are involved. That sort of incident can make you really late! Good advice for beginners, and believe it, OK!

The humble utility/ute in its various forms is inherently more stable than a van, even with mixed suspension, has a better protected driver compartment, and lower centre of gravity and less wind resistance than a van, but still needs care with loading and tying, especially if loading a flat deck ute. Wood makes the best floor, some degree of friction is assured, but always load to the headboard, and always secure the load, even with well-type trays or hinged sides, as bumps or swerves can toss goods right out of, or off, the tray, surprisingly easily. Heavier items should sit over the back axle, but must not slide, so secure and brace accordingly.

Remember, loads at the back will obscure the rear-vision mirror, you will be relying on side mirrors, so make allowances for this as regards clearance, turning, and seeing following vehicles that may be lost in blind spots, as mentioned elsewhere. A large well-fastened security net may be a better option than multiple ropes for mixed loads, furniture and other household goods are a good case in point.

A ute may feel like being in a car, given cab layout and relative comfort, but you have a load that will still need to be transported with care, **meaning with deliberate and controlled manoeuvring, and less speed.** Adapting to a ute driving style that is more akin to a light truck is easier in larger utes with more of a truckish look and feel to them, but the load will also be higher because of this type of construction, so drive accordingly. Moot question, when is a ute a ute, and when is it a light truck? But load management is always down to careful loading and securing, and careful driving when utilising any sort of transport vehicle, regardless of this sort of distinction.

Forklift skills are always required at some point, better that they should be incorporated as part of your licence attainment, but meantime, here are some useful tips for forklift management, if only for the times that you may be loading solo.

<u>Specific Rule</u>: Center of gravity is very important with forklifts, they raise loads, often as high as they are capable of, but to then move around, beyond just minor clearing manoeuvres, ensure that the forks are lowered beforehand whenever carrying a load, regardless of size, to ensure driving consistency. Do not overload a forklift, also not swivel with a load raised, do not accelerate or brake with a load raised, and perform any of these actions carefully and deliberately at any other time.

Before starting and driving off, once again ensure, as for all vehicles, that the forklift is clear, 360° around, and then start off carefully and deliberately, keeping the forks low, and slightly pointed downward. Do not raise the forks until stopped and ready to manipulate freight, ensure that no traffic passes in front of you while the forks are being raised, and be as close to your work as possible to prevent this sort of dangerous transgression.

Gently ease forks under loads, and **gently** ease back, making minimal height adjustments as you do so, but do not try to do too many things at once, and be patient when manoeuvring the forks to free jammed pallets. Come back, stop, and lower the center of gravity before moving any further. Conversely, stop square to a stack before raising a load for placement, and move in slowly only when height attained is sufficient for this purpose.

Always park the forklift with forks lowered, away from traffic areas, tips right on the ground, and preferably with the entire forks inserted into a pallet. In fact, travelling with an unloaded pallet on the forks is a good safety measure, whenever practicable, as well. If carrying trays or bins on a forklift, they should still be mounted on a pallet base, so that there is never any danger of tipping. Be careful to properly secure any one-off loads to the forks if they cannot otherwise travel on a pallet base.

Forklifts are very heavy, do not have suspension, and usually run only on hard rubber tyres, all of which features contribute to maintaining stability of a working forklift. Forklifts, by their very mechanical nature and purpose, are intended for travel over firm and even surfaces. Be careful over uneven or soft ground, better to make a lift onto a carrying vehicle, then unload at the new location, than risk travelling over doubtful ground. There should be warning lights and beepers, essential for such a vehicle working in close proximity to pedestrian traffic, and other vehicles, including other forklifts.

Purposefully remember what is poking out in front at all times. Think about what damage could be done by inadvertently driving those fork tips where they should never go, and do take care to ensure that nothing useful or valuable goes under a wheel, like a foot in a good boot, or hard and raised, that could destabilise the forklift, especially when moving in any direction while carrying a load, either high or low.

<u>General Rule</u>: Over-familiarity is a major forklift danger, both for drivers, and for others working around them, so be vigilant as <u>you</u> drive and/or move around, at least. Forklifts are most unforgiving if driven carelessly, especially in confined spaces. Also, they do not run on fresh air, so do not forget to fuel up, change a

bottle, or plug in, as the case may be, whenever necessary, and especially when this is your responsibility. Do not assume that someone else will do this, especially when away from home base, note that forgiveness for an unusable forklift that inconveniences someone else will not come so easily, and believe it, OK!

<u>Light truck</u> for the purposes of this Factfile will refer to those trucks with a single drive axle and dual wheels, usually with a plain gearbox, perhaps with an overdrive or split diff. This is the basic truck, usually up to 10 tonnes, being the common work-horse for city deliveries, or the farm transport hack, the sort of truck that most aspiring transport drivers will get their licence in. This class of truck may also tow a trailer on a ball connection, or even a suitable tandem axle trailer on with a heavy-duty hitch, with power and brake lines to connect. Any quality Heavy Vehicle Road Code will give these details, and dimensions, with current terminology as well.

When travelling unloaded, the vehicle's suspension will be fairly rigid, there may or may not be power steering, you will be higher off the road, there will be more mirror use, as well as extra allowances to be made for close manoeuvring that can only be learnt by practice. You will be higher above the road, will see more, have a larger steering wheel, more room for your legs, larger pedals, and, a **real** gear lever. But do not let this go to your head, there are also more vehicle management skills required, and, importantly, gaining of extra driver responsibility as the size of the transport vehicle has increased, OK!

A diesel motor usually provides motive force for this size and type of vehicle. Thus management of this type of engine needs to be properly learnt to get the best work and optimum useful working life from an engine that needs to be much more robustly built than a petrol motor, working by push more than explosive force, is slower revving, and needs to warm more than a petrol engine to be efficient after a cold start. A diesel fires with the heat of compression of mixed air and injected fuel, so the nearer to optimum operating temperature it runs, the more efficiently the engine will work.

Some warming time should be utilised after start-up for this reason, and this will also extend engine life. Idling speed should be sufficient to run the oil pump, as well as alternator, and compressor if there are air brakes, so ensure that the setting is correct. Any turbochargers present will also benefit from a gradual warm-up as well, and may require an extended shut-down period before engine switch-off.

Watch the dials, especially temperature, oil pressure, and revs. Note that a diesel does not need ignition current, only a battery sufficiently robust and well-charged enough to start the motor, but the charge rate should be noted, as battery health is still necessary for starting and lights, even if not for ignition.

A diesel motor revs more slowly, so there is a more flexible feel clutch-wise, and generally really does feel quite different to managing a petrol engine. More than once it has been said that the first experience of driving a diesel is like the first time you have sex, you will never forget it! The clutch is stiffer than that of a car, will have longer travel, and starting off will be more gradual. The feel of the gears will alter with loading, in fact, gear changes should be easier and smoother with a load, and the suspension should then feel more comfortable also.

Diesel engines are more tolerant of low revs than petrol engines, power bands are more flexible, but always change when the roughness of the engine note characteristic of low revs under load is evident, and always remember that there is an oil pump present that requires optimum revs to do its job properly, and when an engine is lugging, oil pressure may not be optimum.

Syncromesh gear boxes are prevalent now, but learning to **double-de-clutch** is a useful skill still relevant to older vehicles, and at times useful when worn syncromesh is making changing tricky. Matching optimum revs and road speed to gears is important for all smooth changes, and to allow the engine to work efficiently and evenly, but do not suddenly over-rev, as the revs will build more slowly, so you **must** alter your engine management skills from petrol to diesel operation if you are more experienced with petrol motors.

There may or may not be air brakes, but if they are present, be sure to have full air pressure before attempting to move off, they will remain locked if air pressure is not sufficient to release them. Note that a more careful foot is needed when applying air brakes. Otherwise, drive with the usual regard to easing brake wear, use the engine as brake, and allow driving space and speeds that will ease brake workload as well as gear changing, such as before descending steep hills, especially with freight. (Note that exhaust brakes are usually a feature of larger heavy transport vehicles, and are very useful, **but** nowadays do have limited use in built up areas because of the noise factor.)

Visibility from within a light truck is better than smaller vehicles you may be used to because of height and the wider windscreen, but the vehicle is still bigger now, there are greater allowances needed for manoeuvring, and more constant use of mirrors is necessary no matter what the vehicle may be doing. As regards overall dimensions, you must always be ready to check overhead as well as width and length clearance, and often weight restrictions may apply on brides and ramps, etc., so you must know your truck's dimensions and that also means intuitively in any given situation.

General Rule: If there is no clearance or weight restriction sign where there might be a problem, stop, get out, and check. You must know at a glance any match for clearance of your overall height, and watch out for possible non-clearance that may also include unmarked low bridges, power lines, gates, or even tree branches. A

suspect road bridge may need checking for **weight and/or width** if you need to pass over it. **Canopy trucks especially require continuous clearance until they are clear of hazards**, so beware of any slight changes of direction or tilt, while passing hazards, that consequently may lead to hitting, scraping, or even jamming the vehicle. Proceed slowly until you are clear.

Livestock Haulage: Books have been written on stock management, so this Factfile will not presume to rewrite them, but some basics are noted for your information as a potential livestock hauler. As far as driving skills are concerned, these will require managing crates and loading ramps, being familiar with various types of stock, all needing particular applied skills, often having to tolerate odd hours and long waits, and the same driving considerations are needed as for passenger bus driving, especially concerned with diminishing the effects of inertia. However, this is interesting work, and worth gaining the experience in order to engage in it.

Crates used for livestock haulage can be slid onto flat-decks and secured, as is so often the case with the multi-use farm truck, and there is more than one way of lifting and parking these crates, as you will find out. But the universal rules are to have the crate resting where it is easily accessible, unobstructed, on flat and firm all-weather ground, and to make sure it is stable and secure when parked on or off the truck.

Crates for livestock are also utilised as semi-trailer units, or truck trailers, which involve larger vehicles and **requiring special licences and experience to drive them**. However there are common factors to consider, whatever the size of transport vehicle being used, eg., there should be no sharp edges, inside or out, or faulty door hinges or catches, there should be mesh laid if the deck of the truck is otherwise smooth, as stock must be able to keep their footing.

There should be comfortable stock numbers that will also ensure a stable load, helping to brace one against the other, but never with overcrowding that will condemn any animal which falls and cannot rise, and sometimes death can follow very soon after in overcrowded conditions. If you must travel long distances, (which is better done at night if possible), also remember to seek shade at stops, which should only be brief anyway, and arrange unloading and watering stops if the journey is sufficiently long.

General Rule: So much of stock transport is commonsense and empathy with the animals, they are not just inanimate freight, and you are expected to oversee their survival, well-being, and safe delivery.

Crates will vary, of course, for the size and type of animals carted, but there are some other commonsense rules for livestock management when loading and unloading, such as no gaps, especially underfoot, so ensure that ramps are square on to the end of the tray, because a broken leg can easily result from untidy backing. Gaps to the sides may mean escape attempts, and so will weak rails or low rails, animals being smarter sometimes than we give them credit for. Be square to the ramp with the rear door, so that animals have a good line of sight, and do not baulk at a partially blocked access. Also, plan your load carefully and logically, especially if you have more than one stop, or if you have more than one level, such as for sheep, although this is more likely to involve crates made for larger vehicles.

Handling skills involve patience and consideration of ongoing animal condition; do not stir animals up too much, and be prepared to use opportunities of the moment to encourage forward movement. For instance, identify the "lead" animals who can be more easily encouraged to try ramps or doors, then others will follow. Even if you have a dog to help, that dog should be a steady worker, responsive to commands, rather than a tear-about, able to keep the stock moving, but never unduly stressed.

Electric prods may be needed, but do use these sparingly, especially with animals due for slaughter, as bruises and stress do not help economic returns. At times you may be on your own, although with luck a farmer will be always present to manage their own stock, with your help. If you become a professional stock carrier, then having your own dogs will definitely be an asset.

Horses, especially, will need patience and care, because if sufficiently stirred, they will lash out, often raging dangerously until they can escape, and they do remember negative experiences, so leave management to owners, trainers, even small bribes, judiciously given, are better administered by those who know the animals. Horse transport, however, is mostly a specialist branch of livestock transport.

Semis, Truck-and-Trailers: Usually motive units over 8-10 tonnes, being bigger versions of the light truck, and also including prime movers and/or towing vehicles, with additional articulated trailer(s). There are bigger engines, bigger and more wheels, **more axles**, more width, more height, more gears, etc., but maintenance and management skills are basically the same as for light trucks, only more so.

Ample space for manoeuvring will always be needed, and you will always need to be careful about firm carriageways, regardless of surface, because the bigger the vehicle, the quicker and better it will bog when on susceptible ground. If you park a **semi's** trailer, always be sure that the legs are resting on solid **level** ground, or at least on good temporary foundation. Trailers with their own turntables will still need firm ground for parking, but weight is better distributed over all wheels, with less likelihood of sinking, and the hitch arm is of flexible hinged height as well.

Trailer connections, and how to manipulate them, will need to be learnt, as well as ensuring that they are serviceable, and, properly connected at any given time when being towed. Semis have a large turntable-and-pin

connection, large trailers can have steering turntables, truck-and-trailers have pin/hook-and-eye hitches, etc., and there will also be power cables and air hoses to connect. **Refer to your Road Code once again, plus whatever can be learnt on the job, in lieu of more formal training at the present time.** Backing and hitching of articulated vehicles will need to be practised, but if you have used a trailer of any kind beforehand, it is more of the same, but much bigger, with more care needed.

Try not to over-manoeuvre, so that overcompensation does not result, these vehicles work better with smaller, more careful steering movements, and it is also important to have a good line before you back, or turn for that matter, when you are moving either way, so ensure that you have ample manoeuvring area at any destination. This is important if you must disconnect a trailer as part of the loading or unloading process, once again, use firm level ground, and be sure the trailer will not hinder you where you have parked it. Disconnecting air hoses should lock the brakes.

General Rules: Check out unknown surfaces and potential manoeuvring spaces on foot when necessary, and in rural areas, be extra careful on unknown roads, sometimes it may be wise to take a tour in a smaller vehicle if distance is involved. Weather will definitely have to be considered, roads will change in nature, and off-road probably is not worth trying on wet ground. With luck you will always have a well-used truck manoeuvring area at destinations, but there will be exceptions, and you must make judgements accordingly.

If you do get stuck, do not try too hard to power out, breaking a drive shaft or axle will only make matters worse, whereas a tow, even from a smaller vehicle working off firm ground, could just make the difference. Tractors, graders and/or dozers may be needed, though much can be accomplished by waiting for the ground to dry out if there is time. If your wheels make any significantly impression off-road, then find hard ground as soon as possible, as sinking may worsen while the truck is stationary. Better for a lighter vehicle to come to you, to function as an off-loading platform, than to risk a heavy vehicle being bogged.

A book could be written just about freeing bogged trucks, but be aware that the bigger the vehicle, the more care with any surface or lie of land that you may need to travel over, all part of professional responsibility, and, as driver you have the last say about proceeding. The bigger the vehicle bogged, the bigger the problem to get it moving again, OK!

Another weight consideration for drivers of larger vehicles, apart from road shoulders and soft ground off-road, is the damage that can occur with the collapse of pipes, drains, slabs, guttering, septic tanks, cable conduits, or whatever, you name it, and a heavy vehicle has probably been driven over the ground covering it, with adverse results. If you have made the effort to identify these damage hazards, then the onus is on those who have not otherwise briefed you properly, or provided the means to forestall damage, such as timber padding for a gutter, or markers placed to aid manoeuvring. If you are on your own, think about the possibility of what is under the ground if you must be off-road, especially near buildings.

If you travel bob-tail with a prime mover, be careful with speed, traction, and manoeuvring, as they are supposed to carry weight, and may become unstable without warning if driven carelessly. When you are hooked up to a trailer, still take care with cornering, as despite the weight, the composite vehicle is relatively narrow and high, so take care with speeds, especially cornering on unbanked roads. Loading will require reference to ultimate centre of gravity, as for all transport vehicles, and cornering will still require commonsense whether loaded or not..

Sudden or emergency braking will need to be practised also, as trailer braking will need to be co-ordinated to prevent fish-tailing, which can be prevented, or at least minimised, by applying the trailer brakes just ahead of, or more severely than, the prime mover brakes. An out-of-control trailer will pull a prime-mover off the road, and give any other vehicle in range a massive side-swipe, with predictable results.

Major forward momentum and inertia must be accounted for in handling any aspect of heavy transport driving, especially at speed, thus, potential braking traction and stopping distances are always a major part of how you judge the road ahead as you drive, wherever you are, and on any standard of road.

If you run into something smaller, then you will most likely ride up over it, if it does not also flip the prime mover. If you hit something big head-on, then all that weight behind you will drive forward with inertia that will probably crush your cab, so do not underestimate the probable consequences of poor driving and/or lack of attention.

Be careful, be vigilant, and know what you are doing. A smaller vehicle will come off worse in a collision with a larger one, but hitting anything with more resistance will result in an impact made worse by speed, momentum, and inertia all acting together. Do not end up as a major feature on the evening news, especially as a result of an accident you caused, or could have avoided, OK!

Be knowledgeable, too, of weight and load specifications, and the fact that weighbridges are becoming more common. Observe speed limits, and any other warnings and restrictions, and always give ample prior warning of what you intend to do. Your vehicle is among the biggest on the roads, you must be among the best to be driving it in terms of skill, commonsense, and experience, and, you do need to have and keep a clean licence to pursue your profession.

So, to round off this short description of heavy vehicle management, you should understand by now that that **heavy vehicle licences** are a big step up from a light truck licence, so try your best not to learn the hard way, do your time as an offsider, and in as many different conditions as possible. Finally, if you cannot manage to manoeuvre competently within the home truck-yard, and around the adjacent block, then you will not be ready to venture further in a heavy vehicle, and believe this General Rule, too, OK!

Driving buses is a good clean job, buses are usually driver-friendly, hours are structured, and there is usually job security for those who wish long-term employment. The profession can include driving long distance coaches, urban transport, school duties, or just for special occasions, but, you must be fit and healthy, with an appropriate bus licence and current medical certificate, and, **General Rule:** You need to be patient, and very good at public relations, if you drive buses.

Driving skills will include smooth stopping and starting, easy cornering and care with vehicle clearance at all times. You will need very good judgement for overtaking and passing, and if you cannot successfully do this at a given time, , then be patient, there is too much at stake. When you stop to let out passengers, always pull over as far as possible, and never double-park, because you will obstruct the road, but also, in case an inner vehicle pulls away, and another following vehicle then tries to use the gap. It does happen, there is that brand of fool Out There, believe it, OK!

Practice the "bus driver's stop", which dissipates inertial force by easing the brake pedal at completion of braking, before actually coming to a halt. But in order to do this comfortably, you must maintain an adequate following gap behind vehicles, and remember that not all braking will eventually terminate in a halt, such as for lights and stops in urban areas, so avoid braking situations that may need an extreme reaction, or could require sudden avoidance measures to be taken. **Bus drivers are never in a hurry when carrying passengers.**

Those who drive buses in rural areas, especially on narrow roads and/or gravel roads, will need to take care at all times, and in adverse conditions that you consider hazardous, with your professional judgement, be prepared to advise against bus transport until conditions improve. Those who drive buses long distance on highways and freeways need to be fit, fresh, and capable of sustained concentration, and, able to deal with traffic streams at speed, including during any overtaking and passing.

As the media so often portrays, a bus crash at speed is not infrequent, and usually very serious indeed, especially if there is a subsequent fire. Thus, rest periods and proper food are essential, and the vehicle you drive must be in good condition. Your people skills will need to include being able to deal with tired and sometimes disoriented passengers, perhaps those with other languages and cultural backgrounds. So, you will need patience, and some clear and concise public communication skills for whatever eventuality, not least being to ensure having all are on board who should be on board, at any given time, OK!

Children and the infirm or elderly may need your special consideration at any time, to help with luggage, seating, (especially before driving off), boarding, and alighting. At all times, for all passengers, be vigilant of door clearance and safety before opening and closing them. Passengers should be well clear of the vehicle and off the road, before you depart from a stop. Following traffic should always have regard for safety when a bus stops, or is already stationary, but there is always that one stupid exception who may act against common sense, so be ever vigilant.

In urban areas, buses are increasingly being given more latitude regarding right-of-way, and bus lanes are becoming common, but you should still drive with customary caution, because of what you are actually driving, but, remembering that you must also drive other vehicles too. **Do not become complacent about unthinking transfer of training while driving your own car, which can be common with off-duty bus drivers, perhaps because of the passenger factor.** Slowing down for people at bus stops in urban areas is one humorous, and probably harmless, example of how bus-driving skills may be transferred to driving your own car, but do not unwittingly confer on yourself the same right-of-way as a private motorist that you would as a bus driver, that may have more serious consequences, OK!

General Rules for pedestrians about moving around any parked vehicles should also be stated at this point: Always advise children who intend to cross the road, even at a pedestrian crossing, to wait until the bus has departed, so that they have full road visibility. No-one should attempt to cross the road in front of a stopped bus, you can only hope that this was taught along with early pedestrian skills.

Likewise, no driver should get into a cab on the driver's side, as a matter of common practice, without approaching from the rear of the vehicle, unless there is no easily practicable option, in which case, **peer around before venturing around** from the front. There is usually no driver's side door on a modern bus, anyway, but there are occasions when you will need to walk along the driver's side, **so be careful of oncoming traffic, from either direction when you do, whichever way you walk around any vehicle.**

Approaching a cab door from the rear of a truck on the driver's side is obviously not so practical if you have charge of an overlong vehicle, especially with a trailer, so again, always take care to peer around the side of the cab to see what oncoming traffic there may be, before getting in the driver's side door. In congested traffic conditions, be prepared to use the passenger's side door for getting in or out if necessary. An open driver's side cab door

presents quite a target for a fast-moving vehicle running close to the side of a stationary truck, and all the more serious if you let yourself come between them, OK!

A delivery driver's worst nightmare is to be working both sides of a truck at peak time on a narrow city road that is a main artery or bypass. Just working from the back of a hard canopy can have its moments, even so. Local bodies and commercial interests, too, often see safe loading zones or off-road truck parking areas as a waste of good real estate, and tend to dispense with them accordingly.

A few hours off-siding on a busy beverage truck in narrow city streets or dodging streaming main road traffic is urgently needed to educate some urban planners, after all, trucks are the commercial lifeblood of business centers, especially as they also transport goods away as well as bring them. Customers and deliveries are equally important for good turnover, but, too often transport gets second best in regard to accessibility, working, and driving space.

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Going Forwards: This covers any forward motion, from lining up for backing to freeway travelling, and even when being towed, but the priorities for transport driving, and drivers, are the same:

General Rules: You must have visibility, a clear run, be on a sound surface, and be driving for the conditions, as well as the road rules, as and when these apply. The importance of driving with a good line on the road was mentioned in relation to van driving, and applies to any class of vehicle. For any large vehicle, the only place to be, driving on any road, is clear of the shoulder on your correct side of the crown or white line. This is easiest on a freeway, or other marked road, of course, but use your judgement elsewhere, especially if you need to stop or pull right off.

Remember heavy vehicles are bigger, in all dimensions, have more forward momentum, more inertia, less manoeuvrability than smaller vehicles, sometimes special speed limits apply, etc. In fact, once you are on the open road, all sorts of controls, rules and standards apply to you and your vehicle, so be sure you are knowledgeable and compliant.

Mirrors, dials, forward vision, engine health, vehicle stability, and vehicle travel are checked in turn repeatedly as you drive, an example of cultivated driving habits that should become instinctive if you do have an aptitude for driving. Indicators must be used well in advance of your intention to turn or stop, and brakes should be applied similarly, so that following traffic has time to react. Always discourage tailgaters with a judicious tap of the foot-brake to warn them to back off, for their own good as well as to rid yourself of an unwelcome rearwards distraction that interferes with your concentration. The brake light should flash briefly if operational.

As said previously, **on narrow roads, smaller vehicles must deviate,** not you, and if another heavy vehicle looms, then common sense and mutual courtesy should prevail, take the initiative, if you can, to select the best passing point, and never forget that extra metre or so to allow for mirrors to miss in passing, as well. On any road, you should have that good line, like an imaginary rail, which you follow. Do not cut corners, use banking to keep momentum up when cornering, do not wander, have an eye to following vehicles, and be prepared to allow overtaking when safe.

Specific Rule: Overtaking needs care and attention, and if you wave someone through, then you better have good judgement about road conditions, and free carriageway ahead. Likewise, if you decide to pass, then you should be able to do so on your own merits without anyone else making way for you. If someone truly stupid forces the issue when attempting overtaking of your vehicle, then let them pass regardless, so that this liability is soon well ahead of you.

Blowouts are a serious problem with front wheels, although if your tyres are in good condition, walls never scrubbed or bruised, and optimally inflated, then you could go through your entire career without having to face the problem. But if a front wheel blowout does occur, then just hold steering way as best you can, and try to bring the truck to a halt in as straight a line as possible, because there will be immense drag to the side of the blow-out to cope with, and you must avoid either veering off the road, or into the oncoming traffic.

Such an event is the reason why steering wheels should not have thumbs wrapped around them unless briefly necessary for some extra grip, because if the steering wheel jags violently, you can severely damage one thumb, or even two, which will reduce your ability to control what steering capability may remain immediately after a blow-out occurs. Change the wheel as per usual, **but waste no time before fitting a new, and balanced, replacement**, and proceed cautiously in the meantime until this is achieved, as front wheels and tyres should be matched as to in type, tread, and also balanced.

Slipstreams of large vehicles will affect smaller vehicles, also pedestrians and cyclists, whether they are in motion or not. Because of the turbulence pattern ahead of the larger vehicle, there is a tendency for air to accelerate just ahead of the truck, and push at objects being passed, then to draw them towards the side of the larger vehicle as it passes, then as the "after-wave" hits, the smaller object will then suddenly be repelled. Try not to pass too close to anything at high speeds, for obvious reasons concerning pedestrians and cyclists, but also note that a small car may be seriously de-stabilised by a large slipstream effect at close range Be aware of what effect the wind of your passing can have on smaller entities, stationary or otherwise, whether approaching you, or being passed by you.

With close manoeuvring such as moving off-road, always be aware of sway, suspension, and steering shock, always proceeding slowly, **let the vehicle gently find its own way**, especially if you are moving over rough ground such as a track. Sway or lean needs to be monitored as to proximity to trees, buildings, etc. Pipes, power boxes, and eaves, especially on alley walls, are also common problems with sway or lean, just to name a few hazards to look out for.

Revs, speed, and gears should always be an optimum match, so ease the work of the truck, beginning when you first start off, just get the truck moving into and through the lowest gears, and allow speed and momentum to build up gradually, especially when driving with a diesel motor. At any speed, also give your load a ride that is smooth, and not subject to extremes of inertia that will de-stabilise it, especially over long distances, as load destabilisation can be cumulative, and any serious load shifts may also destabilise the vehicle.

These are matters a professional contends with as part of the job, and with pride for the job well done, as with so many aspects of transport driving, as by now you will have realised. When this all becomes second nature, then you

will be able to contend more comfortably with road rules, other traffic, and changes of conditions that are all part of your working day.

The Sweet Spot: There is, for any vehicle, for any size, at any given speed, but from a practical point of view, more applicable to cruising speeds, a "**sweet spot**" within that forward motion that is a balance of speed, weight, inertia, forward momentum, engine torque, road surface, and ultimately, fuel consumption. That sense for the performance of the vehicle on the road, part of your inherent mechanical empathy, will tell you when this balance is evident. There is a flexible feel to the way the vehicle moves, revs can be backed off slightly without loss in speed, the engine will be quieter, and you, as driver, will feel a slight easing of tension and vibration as well.

At this point, your vehicle is performing optimally, and with luck, your rate of travel will suit the road conditions, the flow of traffic, road surface, and timetable. Get a feel for your vehicle's sweet spot when you are cruising, you will be getting the best from the vehicle, and you personally will not work so hard.

General Rule: The bigger the weight, the higher the inertia and momentum, and thus the sweet spot speed, but, speed limits must ultimately be observed, so remember that, too, OK!

Going Backwards: The priorities for reversing are basically the same as for driving forwards, there is the same need for care, maintaining vehicle and load stability, and easing the work of the vehicle. Reversing is also easiest when there is good light, no traffic, plenty of room, and someone behind to watch your back, but this is seldom the case so, General Rule, plan your backing manoeuvres carefully, and do not rush.

Also, always check on foot if you are not sure of your ground, especially at an unfamiliar destination. Try and line up visual cues, and if you need to reverse around a corner, your back wheels are then the fulcrum around which you turn, unless you are reversing with a trailer, in which case, a sound mental picture of your proposed turning circle will be more appropriate.

Reversing up a slope should be avoided if practicable, as traction is lessened, as is visibility, and clutches are done no favours; much easier to drive up, and then ride slowly back controlled by brakes and reverse gear before turning. Generally, reversing over uneven ground needs the same care as for going forwards, there will be similar sway and lean to contend with, but even lesser and different visibility.

Transport vehicles nowadays should have reversing lights and beepers, but you must still be vigilant, as there is always someone or something lurking that will chance their luck as vehicle of any size is reversing. Reversing into lesser light, such as is often found within a loading bay, needs care. Never be too proud to ask for someone to watch behind you, especially when there is no landing, and the truck, the freight, forklifts and staff are all on the same level in the same area.

Pause, with indicators and buzzer activated, before reversing to ensure that all are warned, and also enable staff to make allowances for backward movement of your truck, wherever you may be, as this will necessitate changing the layout of their working area, such as making way, ceasing traffic, moving obstacles, etc.

Reversing, being done at low speeds, means little or no momentum for overcoming pot-holes or curbs and guttering, so **you may need to rock forward at times**, to get momentum, then into reverse, and apply slight power to help the vehicle overcome the obstacle. Avoid gunning a motor, without some small latitude for developing momentum in those circumstances, to avoid consequent wear and tear, even a possible broken axle or drive shaft. Patience and perseverance are advised in these circumstances.

Try and use the "lie" of the land when manoeuvring at low speeds in either direction, to help the truck with momentum switches and changes of direction. This will help steering, too.

Parking: This is a matter of commonsense and planning, such as choosing good ground, as mentioned, but there are other important aspects, summed up thus;

General Rules: Never leave a transport vehicle, any vehicle, unattended without motor switched off, in gear, and the handbrake on, especially on a slope of any degree, those two Laws will always apply, so cultivate careful habits, OK! Even the added inconvenience of doing this repeatedly on a delivery round is worth the reassurance of knowing that the truck will be there when you return, and did not rampage away because a handbrake slipped, which can happen even on a small slope. This is so important, given that extra size means extra weight, then a higher terminal velocity and inertia to be resolved, when a runaway vehicle finally "stops"!

Air-brakes are supposed to lock on if air pressure drops, and sure, you may leave a truck with the air brakes locked on, but you may later be in a vehicle **without** air brakes, and be caught out when there is a failure of some kind. In either case, **use the mechanical handbrake for added security**. **Your choice, your judgement of the moment, but the subject must be raised, OK!** There is also that matter of security of your vehicle in any given circumstance, which includes any parking.

Again, with respect to lie of the land, always park "with" a slope, especially if the truck is to be left for any length of time, as this will ease starting off again cold. Always park facing outwards, especially when away from home base, there is always a time when a tow may be needed, and for the same reason, do not park on lower ground, or in a dip, or either way down the bottom of a slope, all of which would make matters worse if towing was ever needed, Murphy's Law and the Law of Averages apply, OK!

Always lock up when in doubt about security, and that means after the engine is switched off, and the vehicle is properly stabilised. For those who misplace keys, two sets is the only way to go! Use commonsense, think proactively, and think through in these matters, all part of being a transport professional.

Finally, this short Factfile can only offer general transport management guidelines, therefore you must be prepared to fine-tune your own approaches to travel and manoeuvring, whatever the ambient conditions, especially on seldom traversed roads, and at seldom-visited or one-off destinations. When you have a regular route, fine-tuning your work approach is so much easier, and there is satisfaction to be gained from having achieved the best result when dealing with given conditions. But this will be a product of increasing experience, and a willingness to strive for optimum results. **Your judgement, your decision, your responsibility, OK!**

Driver Well-Being: Maintaining your own wellbeing as a professional driver can also be classed as a necessary driver skill that requires commonsense and self-discipline. This begins with sensible health care, good diet, adequate sleep, no substance abuse, and avoidance of distracting and enervating tension.

For safe driving posture, remember that two hands on the wheel, at position "10 to 2" as much as is optimally possible, is sensible; if this cannot be sustained for whatever reason, pull over and make whatever adjustments are necessary to maintain freedom of both hands to drive/steer the vehicle. You should also be comfortable but not too comfortable, also not slouching or over-relaxed, and always with a good view of the road and/or your mirrors. Truck drivers are also like Royalty when it comes to comfort stops, always take them when you can get them, this will make life easier, and concentration better, believe it, OK!

Some limited tensing and relaxing exercises may be possible while driving, but regular breaks every 2 hours or so are the best means of easing muscles and joints and restoring alertness. Remember, The Prime Directive of professional driving is to complete your journey, and your day, in safety. Alertness needs to build up, so easing back into your work at the start of your day, and also after a break, is important, as driving can be hazardous unless you are alert and re-attuned to what you are doing, and accident statistics bear this out as well. Light meals only are important if you must press on, heavy meals need a break of an hour at least, because blood that has been keeping your brain sustained during driving is being re-directed to the digestive system. Be alert, avoid accidents, and stay alive.

Radios are good company, but remember that you must always be able to hear the vehicle running to ensure, along with road feel and the messages from the dash, that all is well. Mobiles should be hands-off, or pull over. Enough truckies have already been killed or injured by injudicious use of mobiles while driving. CBs require less handling, but are still a cause of distraction, so be careful using them as well. **Your judgement, your decision, your responsibility, OK!**

There are other <u>General Rules</u>, such as, <u>if you are under pressure to perform beyond limits of safety and endurance</u>, <u>especially with long distance driving</u>, <u>then change jobs</u>, and forget about employee loyalty in this matter, the employer does not deserve it. Never be too grateful for a job, either, and never be beholden for money or services to an employer, because even with the best of intentions, exploitation will usually follow, and most likely in the form of increased hours for no real gain to you, with an obligation that will never be eased. <u>If ordered to drive an unregistered vehicle</u>, <u>other than to inspection facilities with an appointment</u>, <u>you should refuse</u>, even if this means employment termination. You do not need that sort of employment anyway, OK!

Likewise, at all times avoid being compromised by customers, or even other drivers of poor integrity who may desire "special" favours or considerations that are unethical or otherwise unprofessional. Some goodwill and flexibility that keeps good business relations and contributes to a balance of perceived obligations should never be exploited by anyone you deal with, and all such "goodwill" situations will need ad hoc assessment, and some expedient diplomacy to avoid entanglements that could or will compromise you, and your continuing employment. A clean employment record is as important as a clean licence to a transport professional.

Another too-frequent problem is dealing with customers who think that a driver is some lowly minion who can be drafted as unpaid labour to be at their beck and call. When this looms, be firm, and be consistent, you have other customers, and a schedule to keep to, so do not allow yourself to be taken advantage of. When you begin a new round, start the way you mean to go on, and stick to this, but do allow some latitude to customers who are polite and appreciative of help, especially when heavy goods are involved. A quick tea or coffee offered is a token of their appreciation, and should be taken as time allows. You will soon figure out the best and worst of customers, and the good customers will outweigh the bad, and are always a pleasure to deal with.

For your wellbeing, and that of all other road users, there are road rules to observe, and also applying of road courtesy to ease those situations where some flexibility, tolerance or special consideration may be required on your part. It should go without saying that no matter whatever others may do at the time regarding these two main principles of road usage and road sharing, you must not lose your judgement, your temper, or your principles. Remember that a clean licence is a sign of a good transport professional, so keep it that way, OK!

Road courtesy will never go amiss, especially if practised on a regular route. You are your own driving ambassador, and your employer's business ambassador, and both if you are an owner-driver, and you are, of course, always driving in a well-marked vehicle. You are also an ambassador for transport driving wherever you may go, so be professional, and this is made easier by applying professional standards, which, if consistent, are standards not easily overlooked or forgotten throughout your career.

Note also that extensive transport driving, especially involving arduous physical work and odd hours, needs to be eased as you get older. This may mean the difference between a shorter driving career and a longer one, so you might as well plan for this from the beginning. Also, from the beginning, aim for employment that is within your capabilities, not least so that you remain physically sound for as long as possible, and also able to optimally enjoy the time you have as a private citizen away from the job, and whatever physical and mental demands that may have as well.

Do not be proud or obstinate about how much or how well you can work, the industry has no real place for broken down drivers, but a steady and well-preserved "sunset" driver could go on till retiring age, or even beyond.

Carry, and know how to use, a First Aid Kit, and have some knowledge of what to do at an accident scene, for yourself and for others, but you must know what you are doing, or else know your limitations in this regard. **Once again, your judgement, your decision, your responsibility, OK!**

Always try to have on hand, and/or use, good quality equipment that will aid your work, and ease your physical effort. This may also include customer equipment like cranes, hydraulic ramps, real loading bays, handy forklifts, or just your own humble bale hooks or good gloves. Trolleys are probably your best friends, depending on freight carried, so keep them in good order, especially tyres and bearings, and learn to use them as soon as you can, especially in confined areas. Have your own if possible, and never let it out of your sight, and do not rely on customer's trolleys unless they are always well-maintained.

A real treasure can be a good low loader available at a drop-off point, they are easy to manage, but no so easily portable, unfortunately. Try to park advantageously for loading or unloading, wherever possible. If using loading bays, park square to the ramp for safety and convenience. Always take the vehicle to the load, for pick-ups, and the vehicle right to the best drop-off point if you can. Over years of work, you can save much physical wear and tear, believe it! If you always find a loading bay clear, and freight well-ordered at a destination, express appreciation for warehouse staff who are up to their tasks, they deserve this for easing a driver's workload.

With a new destination, always check the area on foot if you cannot see where the truck may need to be manoeuvred, the exercise will do you good, and you may find that space is wanting, or that the address is only general, and there is some other drop-off point nearby. Make notes when necessary, these **will** be of use to you, **or** anyone else who may share you round, this is just one small example of planning and anticipation that can ease your workload, or someone else's in their turn.

Another good tip is to start a run as early as possible, unless there is a definite timetable, because 20 minutes at the beginning of the day is worth an hour or more at the end, believe it, OK! Even just arriving early at work has benefits for the rest of the day, with unhurried checks, adjustment to the exigencies of the day, or easy accommodation of last-minute changes. As mentioned elsewhere, ease yourself in to the working day, including the driving, pick up the tempo gradually, and you will have better day, a safer day, and finish much fresher at hometime.

Safety around your vehicle has many facets, from watching your back to being a non-smoker in a smoker's cab if you are an offsider, wedging wheels when changing attending to punctures, or simply not slipping in something, and all can be classed as part of driver well-being. **Other health considerations** can include care with fumes, toxic chemicals, having and using protective clothing, sanitary measures, and even quarantine measures at times. These days, consideration must also be given to degrees of **sun exposure** working around the truck, as in rural areas at harvest, or just having one unprotected arm, plus neck and face, exposed at an open cab window.

Always remove keys from vehicles, especially shared vehicles, if they must be mobilised for inspection or repair, this could mean avoiding being run over while inspecting brake lines, or unloading a spare tyre, because not everyone checks over a vehicle before starting up and moving off, so remember this, as your life, or someone else's may depend on it, OK!

How to move around the vehicle is also discussed in detail in the section about bus-driving, as the same rules apply to passengers around a passenger vehicle. Transport drivers should always approach their cab door from the rear of the truck, or with great care from around the front if this rearwards approach is not practicable or convenient. As you would understand, this is because, unless you are off the road sufficiently far, the fact that a truck is already wide will further diminish road clearance on the driver's side, and a walking driver is a fair target when there is not much room, and especially if caught half-way into a cab with the door swung open. This is definitely an occupational hazard for delivery drivers in busy cities, be careful, and do not become a statistic.

Hearing will be affected by long exposure to noisy machinery, and poorly insulated truck cabs are capable of inflicting the same damage as well, so avoid them if you can. Sitting in a cab with earmuffs on will help alleviate the problem, but you will miss other vital feedback from your working environment, so you are best advised to work where you have good conditions, including a reasonably quiet cab.

Sunglasses are a must, but ensure they are of good optical quality, and/or prescription if you need them. You will need spares, and even different strengths for different light conditions if you have sensitive vision. Cheaper types may lacking in UV protection, and also can cause optical tricks, such as uneven vision from one eye to the other, as well as being simply tiring on the eyes. Newer multipurpose spectacles that also adjust to light are not cheap, but would be the ultimate driving glasses. Sunglasses can also help to restrict flying dust and other small debris which cause irritation that is annoying, which can also lead to cataract damage, and to pterigium growths on the eyeball that will also lead to corneal encroachment, and thus vision impairment, as well as general eye discomfort.

You should have your eyes tested regularly, just because you do not have a desk job does not mean that you are exempt from changes in your eyes and/or vision, especially as you grow older. The eye-test chart at the Roads

Department, (or your local equivalent), is a quick and economical option for regular vision testing, and they would be only to happy to oblige. But if you experience recurring headaches, sustained fits of yawning, tired and reddened eyes that may have been getting worse, difficulties with focus, peripheral vision, or judging of distance, any or all of these should be investigated, so get your eyes tested. (This should be done regularly, anyway, for the glaucoma test, as fluid pressure build-up within an affected eye will damage the retina permanently if not treated early.)

Remember that your eyes are as vital to you continuing your professional occupation at a high standard as road and vehicle sense, good hearing and good reflexes are, so look after them, OK! Decline of peripheral vision, in particular, will not be so easily identified using the conventional straight ahead eye test, but recurring near misses and bumps may be an indication of such deterioration. Indeed, there is a good case for anyone with a driver's licence to have a comprehensive optical and medical check-up at least annually. If you should develop health problems that limit or could even terminate your driving activities, then accept this restriction with good grace, and do not risk becoming a casualty statistic, or worse, wittingly causing death or injury to others.

All of these matters are mostly, in truth, to do with ordinary commonsense, and as such, should be thought through and dealt with in a professional manner.

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Conclusion: This short Beginner Transport/Truck Driver's Factfile has one dominant message, and that is, if you wish to become a professional transport driver, then set out to become a good one, and be one top of your professional duties for the duration of your driving career. Good drivers will always be needed, and preferably those with intelligence and common sense. To attract the Right Stuff, Transport Operation should be classed as a Career Trade, with high standards required for the mastery of a wide range of driving skills, static and dynamic, as well as business, including ethics, customer relations, and also management skills necessary to work efficiently, and well, within the transport industry in general.

Only the best should ever be appointed to teach the necessary skills. Teaching aspiring drivers, or anyone else for that matter, especially in organised, formal education, should never be some quiet default pasture for the otherwise incompetent. Quite simply, there is too much at stake in the management of safety, complex machinery, road safety, freight integrity, maintaining overall transport industry standards, and recruiting the best driver talent, to risk having poor teachers.

Learning time should be spent in mechanical and tyre workshops, especially, and workshops that build or modify transport machinery would add yet another dimension to personal experience. This may become standard practice for a specialized Transport Trade, but until then, the onus is on the individual to seek out this sort of experience themselves. A large company may have all these workshops in one organisation, or you may have to spend some of your own time around various smaller businesses to learn what you can, **but learn and experience you must.**

You must be focussed, energetic, healthy, and constantly proactive in your everyday thinking, especially when driving. To keep on top of your work, always analyse what is going on ahead and around you on the road, and at the many destinations that you will serve as you do your rounds. Ask yourself, within reason, if some job or activity could be done another way, could you yourself have made a different decision at a particular time or place? This will further condition you for proactive professional and workplace thinking.

When the need arises, could you introduce suggestions for change that will be mutually beneficial, from a recommendation to a local body re traffic management, to improving loading or delivery management that will benefit drivers customers and warehouse staff where needed? You will need to discern when fine-tuning is needed, rather than mere tinkering, and how to introduce ideas in an acceptable manner to other managers. Seeking cooperation and, also, balancing of other professional opinions, especially of your own abilities, must be handled responsibly. As a manager, you decide, so try to make the best decisions.

If there are **matters of safety or fair play** that need your input, be prepared to contribute, and be prepared to move on if a job becomes untenable from a the point of view of maintaining professional standards, and when you can effect no reasonable or rational changes. Job satisfaction is also an indicator of professional satisfaction, and vice versa, and they should both certainly be a feature of every working day. There should never be untenable conflicts of interest or professional standards to contend with if you have worthwhile and honourable employment.

As a transport driver, you should definitely be classed as a professional manager in your own right, with considerable responsibilities, and believe this, OK! Like any good manager, you should have a strong instinct and aesthetic sense for, and appreciation of, any job well planned and well done, no matter who is responsible for this. You should be able to make relevant and useful recommendations whenever required as part of your inherent management capabilities, and, equally importantly, be prepared to accept good professional advice gracefully, in your turn.

Remember too, that as well as being a good technical transport driver, and machinery friendly, you must also be a wise and capable road user, setting a good example of what a professional driver should be, and always teach and advise in your turn when guidance is needed by an aspiring driver such as you once were, yourself.

Finally, always remember, throughout your career, your best assets will always be good eyesight, good hearing, good health, good reflexes, good learning ability, commonsense, good personal ethics, and a clean, up-to-date licence. Once again, do <u>you</u> want to be a Transport Professional? Your judgement, your decision, your responsibility, OK!

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In Truck-Drivers' Heaven:

There are always pens and sunglasses close to hand, your coffee is in a bottomless cup, just right, and always ready to drink, there is no problem with cholesterol, the girls are actually disappointed if you don't whistle, other road-users will toot thank-you, and wave when you let them by, the cops also wave, and confer on you right-of way, there are no tailgaters, and idiots cannot get a licence, there is basic maintenance, but no punctures, tyres never wear, and you never have to change a wheel, windscreens need cleaning, but the sun never gets right in your eyes, freight is always well-packed, organised, properly marked, and with useful paperwork, trolleys, ropes, tie-downs, chains, tarps, nets, gloves, and other favourite tools never leave you, there is night work, but no time constraints, and sleep time is mandatory, customers smile, are well-organised, and never keep you waiting, bosses and proprietors are actually interested in your professional opinion, architects, planners, plus highway engineers, have all done time as truckers' offsiders, loading bays are always off-road, spacious, safe, deck-high, with checkers and helpers ready, there will always be secure parking, comfortable smoko rooms, and handy toilets, there are no bad backs, tired eyes, irritable kidneys, or unhappy marriages, there is never a need to push the limits, and you always cruise on the sweet spot, your wits are saved for driving, and not wasted on worrying. In fact, you really do get to enjoy your work....

All things considered, not too much to ask?

A Baker's Dozen of Important International Road Rules

Keep to the correct side of the road.

Read the road signs, not the billboards.

Drive to conditions on any road, anywhere, anytime, in any weather.

Avoid driving when tired, or when in indifferent health.

Be careful where and how you park, especially in emergencies.

When in doubt, slow down, and also watch your rear vision mirror.

Stay off crowded freeways in foggy conditions.

Do not tailgate, and do let tailgaters pass you ASAP.

Keep your cool, do not let the idiots rattle you.

Never entirely trust blinkers, even your own.

Never entirely trust an intersection, even when controlled.

Do not drink, take drugs and/or use handheld phones when driving.

Never crowd learners, or older drivers, think what it was like for you, and also how it will be!

The One Overall Road Safety Rule is to take nothing for granted, and that includes regarding all other road users, and their probable skills, motives, moods, health, education, ancestry, etc., with a healthy suspicion, without exception. Never assume that anyone will act predictably in any given situation. Always check over the vehicle you are driving, and do keep your own road skills and attitudes under constant review.

5 Extra Rules for Bus Drivers:

- 1) Practice and always use the 'Bus Driver's Stop'....
- 2) Bus drivers are never in a hurry with passengers aboard....
- 3) Bus drivers can always run a bit late, with a smile and friendly greeting, but, never be early....
- 4) Good bus drivers are born that way, though others can be made to be almost as good...
- 5) Bus drivers should always laugh at the passengers' jokes, but, do be careful what joke you tell in return....

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Notes: