



HOLD PROMISE

In his first article for *GT Porsche*, experienced driving coach, Neil Furber, discusses steering grips and techniques for performance motoring.

Steering is the ideal place to begin my series concerning driving techniques and vehicle technology. Although I'd normally start any driver coaching session with a discussion about seating position, it's the driver's interaction with the steering wheel that often requires the most attention. Believe me when I say it really can make all the difference!

I don't wish to gloss over the importance of finding the 'ideal' setup with respect to

the rest of the seating recipe, but since some older Porsches have limited seat adjustment, I'll always favour an optimised driver-to-wheel relationship whenever possible. After all, some of the greatest pleasure gained from driving a Porsche comes from the way it handles bends. Tyres and chassis respond best to smooth-flowing input; improving your grips and techniques will enable you to optimise movements and receive the best information back from the rubber wrapped around your car's wheels. ■



DRIVING FORCE

Introducing *GT Porsche's* resident driving expert, Neil Furber. With a technical background as a mechanical engineer in the Formula One industry, Neil brings a unique technical insight to driver coaching. Splitting his time between the French Alps and the UK, he coaches drivers through his brand, Drive 7Tenths (drive7tenths.com), and is also a Porsche Driving Consultant at Porsche Experience Centre Silverstone.

REACH, RAKE AND GRIPS

What's the best position for the steering wheel and how should it be held? My personal preference is for hands at the quarter-to-three position and just below the shoulders, with both arms showing a bend a little larger than ninety degrees at the elbows. For recent models in the Porsche range, lots of adjustment exists, but in my experience, many owners fail to realise they can adjust their car's steering wheel both up/down and in/out to suit their individual dimensions. It's certainly worth spending time re-evaluating your seating position and trialling different settings for the rake (up/down) and reach (in/out) angle. Sometimes, a small change in backrest angle can help, but

there should be enough range to copy with all but the most extreme cases.

As a quick check to ensure things are in the right place, relax your shoulders back into the seat and let an outstretched arm fall gently on the centre-top of the wheel rim. If you wrist is on the rim, you've achieved the ideal position. If you find your palm, fingers or forearm in contact, I'd suggest having another go.

In terms of grip, there's nothing wrong with the ten-to-two position. Many drivers prefer this. I've come to favour the quarter-to-three grip, however, for three important reasons. Firstly, there's a little more range available at the limits of the 'fixed grip' technique (see separate boxout). Secondly, the slight extra

spacing between hands reduces muscular effort during steering. Thirdly, the hands fall naturally to the indicator stalks and paddles now fitted to the majority of Porsches equipped with PDK transmission.

I'm certainly no fan of one-handed grips, asymmetric hand positions or palming the wheel. My favourite example of bad technique is the one-armed bandit – the classic 'reclined seat and one straight arm with hand at the top' motorway cruise pose. You know the one I'm talking about! This is often justified as being 'comfortable'. In truth, the pose usually stems from fatigue in the arms and shoulders when the steering wheel is too far away.



▲ **Good technique** A quarter-to-three grip is a good place to start when evaluating and optimising steering control.



▲ **One-armed bandit** This classic motorway cruising pose is the perfect example of what not to do when behind the wheel of your



▲ **The pretzel** We can discuss the detail of 'fixed grip' steering on the following pages, but this is the technique taken to its limit!



▲ **Wrist check** Distance is good if your wrist can sit on the wheel rim when your shoulders are positioned back in the seat.

THREE CORE TECHNIQUES

Driving isn't a case of right versus wrong. It's more a case of good, bad, better and best. Simply put, finding a better way of doing things will help to create an improved driving experience. A combination of small changes can be greater than the sum of their parts. I'll introduce you to three core steering techniques across the following pages. Once mastered, these top tips can be blended when necessary.

FIXED GRIP

This is the technique most commonly used by race drivers and offers the best feel and control when small steering angles are used. The hands are 'fixed' to the wheel and rotate it without changing grip. When looking to create those silky-smooth steering inputs for high-speed cornering, fixed grip steering is certainly my first choice. The first few

degrees of steering are the most important to help let the tyres and chassis start to work before the bend develops fully. The counterbalanced nature of two opposing hands on either side of the rim allows a level of finesse unrivalled by any other technique. It's ideal for up to ninety degrees of steering wheel movement, but, at the limits, can reach

half-a-turn, or even a little more with a well-placed thumb if absolutely necessary. Relying too heavily on the limits of this technique can make your arms look like a pretzel, though! It also leads to a loss of control. A pre-loading of the wheel (hands preadjusted) or the 'pull-push' technique outlined below offer a better solution in these cases.



1 A quarter-to-three grip gives the best feel when initiating a turn.



2 The 'fixed grip' technique is great flowing bends up to a quarter of a turn.



3 This image shows where things become less comfortable and control-limited.

PULL-PUSH

Not to be confused with the learner-style 'shuffling', the 'pull-push' technique offers great benefits for smooth steering when you'll need between ninety degrees of steering wheel movement and full lock. Alternate hands feed the wheel in half-turns by 'pulling'

down from the top or 'pushing' up from the bottom. It's an ideal method for tight bends, exiting T-junctions and low-speed car park manoeuvring. Although the staple technique for the majority of 'advanced' drivers trained in law enforcement and civilian circles,

it'll never offer the refinement and finesse achievable with 'fixed grip' steering, but is certainly a technique worth mastering for the right situations. It's not the best technique for skid control, though. Far too slow! This is where 'rotational' steering comes into play.



1 Note the position-leading hand placed at the top of the wheel rim.



2 'Pull' down smoothly with the wheel sliding through the other hand.



3 Continue to pull until hands meet at the bottom, then swap hands.



4 'Push' the other side of the steering wheel up with your second hand.



5 Continue to push until both hands meet at the top of the steering wheel.



6 Swap hands again and continue if you feel more lock is needed.

ROTATIONAL

I'm sure many of you will have been told to stop crossing your arms at some point. Rotational steering is just that. The hands change grip around the rim, one after the other following a rotational movement. I've sat next to plenty of drivers who use this technique to negotiate junctions and tight bends. None of the individuals I've observed have looked comfortable. In fact, once we've worked on 'pull-push' steering, they immediately prefer that

technique! Rotational steering is best for when very high steering angles are needed quickly. It's useful for manoeuvring in tight spots, where you may need to move between full lock left to right and when you find yourself dealing with large oversteer skids.

The beauty of the technique comes from it starting as 'fixed grip' steering. If necessary, crossing a hand over to grab the next armful of lock to regain control of a skid can be

done seamlessly. Once truly mastered, using rotational steering will make it easy to find the 'straight ahead' position once a skid is back under control. The secret lies in where to hold the wheel throughout the technique.

We'll take a look at the finer points of steering in a future *GT Porsche* article focusing on cornering, but if you'd like more information on the core techniques outlined in this article, visit drive7tenths.com and view my detailed tutorials.



1 Rotational steering starts with the 'fixed grip' technique, so ensure you're working with a quarter-to-three grip of the wheel.



2 Now turn the steering wheel. Once passing the quarter-turn position, the leading hand lets go.



3 As illustrated in this photograph, the leading hand crosses after letting go of the steering wheel.



4 The leading hand then grips the rim of the steering wheel.



5 Flip the other hand.



6 Continue with 'fixed grip' steering towards lock stops. You've just completed this month's *GT Porsche* driver coaching tutorial!

NEXT MONTH

Developing finesse for braking and gear selection