



Photos: Martin Galpin/Quaife

DRIVER'S PERSPECTIVE



➔ A Porsche 996 GT3 Cup Car is about as hostile an environment as any sports racecar could be. Every shift must be a positive application of the gear lever, but using Quaife's QBE61G-specific gear lever, I have little doubt and the process of changing gear becomes natural within the first lap. The clutch feels light, too light, but as this test car approaches 30 hours of running, it can perhaps be forgiven.

Under maximum load a small breathe of throttle is all that is required to provoke a seamless and clutchless upshift. There is no significant transmission jolt and the speed of engagement means there is only a small transfer of weight and wasted energy.

Such is the precision of the gearbox, I find myself underwhelmed by the complexity of downshifting five gears in a bumpy and difficult braking area, synchronised each time with a positive blip of throttle. Even a total mismatch of revs on a downshift does little to provoke the kind of transmission or differential oversteer you might expect from this type of car. In fact, I would even surmise that drivers without a good heel-and-toe technique would be more than capable of driving a car with this gearbox fitted at moderate to high speed.

# Positive shift

Seeking to offer an option to the Porsche GT3 gearboxes currently available, Quaife Engineering has come up with the QBE61G, a real racer's alternative

At first glance, it is difficult to imagine improving a Porsche 996 GT3 Cup racecar. However, Quaife's latest 'Q-Tek' gearbox promises just that, and offers an affordable alternative to the 'boxes currently on the market.

Like its Porsche Motorsport counterpart, the QBE61G is a six-speed sequential transaxle gearbox featuring a larger than standard 85mm shaft capable of applications in excess of 500bhp and 450lb.ft torque. As standard it is supplied with a plate-style limited slip differential, although Quaife's automatic torque biasing diff is an optional upgrade. It also features a mechanical sequential shift and internal lubrication via an integrated oil pump.

Mike Quaife, director of Quaife Engineering: 'We could see a

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market amongst club and national level Porsche competitors for a more economical gearbox. It is designed within the dimensions of the original Porsche 996, meaning its integration is a straightforward conversion.'

Looking at the table below, you can see the company has

applications in excess of 500bhp and 450lb.ft torque

achieved its economic goal at least, especially as the price includes a bellhousing, gearbox mounts, flywheel, triple-plate Superclutch and ancillaries. Adding a limited slip differential brings it to £11,900 (\$23,700).

**SPEED SHIFTING**

According to Quaife, it's not a compromise either. 'The QBE61G

achieves a 20-millisecond shift - that's twice as fast as the standard Porsche gearbox. In fact, it's so fast that in testing the automatic ignition disengage was disabled to make the car driveable on downshifts. 'Its reliability has been impressive too. We've completed almost 30 hours of testing in the UK and Spain without a single failure.'

This quality of build is underlined by its potential for applications outside of the Porsche Cup. Quaife Engineering offer a helical set of ratios for use on the road and the QBE61G could even find its way into GT3 endurance racing, such as the LMES or FIA GT.

'Overall, we wanted to provide value for money with the QBE61G,' concludes Quaife. 'When you also consider its performance and reliability too, I think we even surprised ourselves.'

**TABLE 1**

Comparison of gearbox costs (all prices plus VAT)

Quaife QBE61G sequential Q-Tek S	£10,950	(\$21,800)
Porsche Motorsport 996 Carrera Cup H-pattern	£10,656	(\$21,210)
Porsche Motorsport 997 sequential (2008 spec)	£20,661	(\$41,130)