



# CHRIS WITOR

## TRIUMPH 2000, 2.5 SPECIALIST

RE-INVESTING IN THE RE-MANUFACTURE OF SUPERIOR QUALITY PARTS

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### NEW PRODUCT - ROLLER ROCKERS

January 2005

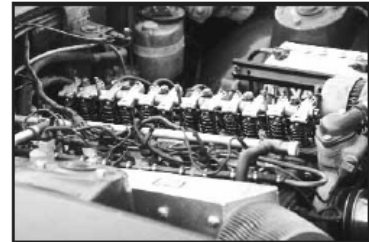
A new generation of high lift roller rockers is now available.

The object of increasing valve lift is to increase power with minimal if any loss to bottom end torque.

These are a well engineered product featuring:

- A hardened steel roller tip to eliminate drag back load thus wear to the valve and guide.
- A bronze bush that runs on the shaft at a closer clearance than original thus reducing noise, with better frictional qualities than iron on steel.
- Aircraft alloy body - original rockers weigh around 70 grams each, alloy versions just 45g each thus a total saving of 300g reciprocating weight.

These are a direct replacement for original rockers and are available in three ratios: 1.5:1, 1.6:1 & 1.75:1. Beyond .390" valve lift, rocker geometry checks should be made to ensure that the roller tip isn't running too close to the inside edge of the valve. If so this can be reduced by shortening the rocker pedestals by half the increase in valve lift, or by using our 214N performance valves with extended tip. However, this isn't a problem with any of the production cams fitted to the 2000/2.5 range as the chart below shows:



#### VALVE LIFT RATIO CHART

Chris Witor

Original Camshaft Application	OE Cam Part no.	Timing Degrees	Duration Degrees	Cam Lift	Valve Lift @1.42 Std	Valve Lift @1.5	Valve Lift @1.6	Valve Lift @1.75
2000 TC 1975 on 'ML' 2500 TC & S 'MM' 2000 on MK3 GT6 & TR250	307621	10/50	240	.215"	.305"	.322"	.344"	.376"
Vitesse & GT6 2000 MK1	306632	18/58	256	.220"	.312"	.330"	.352"	.385"
MK2 2000 'ME'	306785	18/58	256	.220"	.312"	.330"	.352"	.385"
PI MK1 & MK2 to MG 50000 MK2 Vitesse & GT6	308778	25/65	270	.232"	.329"	.348"	.371"	.406"
PI MK2 from 1973 MG 75000 TR6 'CR' 2500 TC 1974 to MM 20000	311399	18/58	256	.240"	.340"	.360"	.384"	.420"
TR5 & Early TR6 'CP'	307689	35/65	280	.252"	.357"	.378"	.403"	.441"
After Market Performance Profiles BCF1	---	25/65	270	.261"	.370"	.391"	.417"	.457"
TH5	---	---	280	.282"	.400"	.423"	.451"	.490"
Hypothetical Examples	---	---	---	.290"	.411"	.435"	.464"	.507"
	---	---	---	.300"	.426"	.450"	.460"	.525"

Ensure valve springs are suitable for extra lift. Early PI, TR5, MKII Vitesse type; inner 102564 and outer 149633 running with .150" thick lower collar 149717 have proven capable of handling up to .430" valve lift at 6000rpm. At this sort of lift -in particular, alloy valve spring caps and lightweight 214N performance valves should be used to reduce reciprocating weight. Available ratios can be mixed if desired, typically using more lift on the inlet, than exhaust valves.

Extra lift is particularly beneficial to power output with a high volume induction, therefore in order of benefit: 2.5 PI, SUHS6 carburetors and manifold, MKII 1½" Stromberg or HS4, and of least benefit to a 2000 MKI with its high velocity/low volume induction.

Cost is £146.88 for a set of 6, or £293.75 for a set of 12, including VAT.



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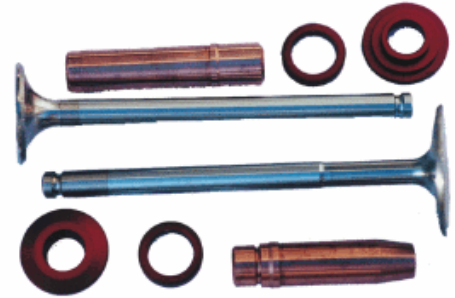
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### QUALITY 6 CYLINDER VALVES & GUIDES. 2000, 2.5, TR5, TR6, VITESSE, GT6

AUGUST  
2009

*In a market dominated by cheap, low spec. reproductions, we can offer the following alternatives for the discerning customer.*

- \* **122257/34** Inlet valve, high spec un-leaded 214N stainless, hard chromed or plasma nitrided stem, hard stellite tip, to resist wear by the rocker, saving of around 5g per valve over OE, reducing reciprocating weight, flow bench developed profile to suit lower lift of the MKI 2000, Vitesse, GT6, .9mm o/s = 34mm to compensate for cylinder head seat wear, and increase flow. RRP £14.00+ vat.
- \* **146128/36.75** Inlet valve, similar to above, extended tip length to prevent rocker running off the valve with high lift fast road cams .15mm o/s = 36.75mm. Suits all MKII 2000, Vitesse, GT6, 2.5, TR5 & 6. RRP £14.00+ vat.
- \* **146128/37.75** Inlet valve similar to above but 1.15mm o/s = 37.75mm. Particularly beneficial with gas flow work and recovery of deeply cut seats. Use with maximum 31.25mm OD exhaust valve. Suits all MKII 2000, Vitesse, GT6, 2.5, TR5 & 6. RRP £14.00+ vat.
- \* **159872/3 30.3** Exhaust valve high spec. 30.3mm, 214N stainless with 80 (122258/30.3) Rockwell B stellite seat for unleaded and LPG fuels, hard chromed or plasma nitrided stem, stellite tip and unshrouded flow profile. Saving of around 5g per valve over OE, reducing reciprocating weight. Suits all MKI 2000, Vitesse, GT6 @ .4mm o/s, and MKII 2000/2.5, Vitesse, GT6, TR5 & 6 suitably inserted heads using production type camshafts. RRP £18.00+ vat.
- \* **159872/3 31.25** Exhaust valve high spec. unleaded, similar to above but extended tip length to prevent (149658/31.25) rocker running off the valve with high lift fast road cams. 31.25mm allows flow of up (146084/31.25) to 60 CFM in a modified head. Suits all high performance MKII 2000/2.5, Vitesse, GT6, TR5 & 6 suitably inserted heads. Compliments 37.75 inlet valve. RRP £18.00+ vat.



### Valve Guides

- \* Machined from copper bronze alloy, Colsibro, which has properties second to none as a valve guide material. Hone fit to 7.92mm after installation for closer running clearance results in; improved heat conductivity and reduced friction, thus wear between the valve and it's seat. *Most other guides run larger clearance, resulting in the seats doing the job of the guides during closing.*
- \* Extremely durable, we now include a 5 year/100,000 mile road warranty *whichever is sooner.*
- \* Lubricity of copper bronze alloy prolongs valve stem life.
- \* Inherently high heat conductivity.
- \* Installation stops provide consistent and accurate fitting, and eliminates the possibility of the guide slipping into the head in use - *a common problem with lower spec. bronze guides*
- \* Inlet guides use top seals, reducing oil consumption and valve head contamination. *Build up of deposits on an inlet valve hinders gasflow*
- \* Flow profiled: Tapered on inlet and bull nosed on exhaust, carefully tailored to port section.
- \* 5 year / 50,000 mile road warranty - but should be good for well over 100,000 miles.



**119622cb/in** MKI 2000, Vitesse, GT6 inlet  
£13.50 + vat

**119622cb/ex** MKI 2000, Vitesse, GT6 exhaust  
£13.50 + vat

**58923cb/in** MKII 2000, 2.5, Vitesse, GT6,  
TR5, TR6 inlet. £13.50 + vat

**111869cb/ex** MKII 2000, 2.5, Vitesse,  
GT6, TR5, TR6 exhaust.  
£13.50 + vat

Inlet top seal, £1.74 + vat

- \* Alloy Valve Spring Cap, red anodised aircraft alloy saves total 85g, reducing inertia loadings, set of 12, £48.00 + VAT
- \* Collar 149717 fits under inner valve spring 102564 RM in red anodised aircraft alloy, set of 12, £10.20 + VAT
- \* Valve Springs Inner 102564 and Outer 149633. Fitted seat pressure inlet 30 lbs @ 36 mm, exhaust 38 lbs @ 35 mm. Suitable for cams: TR5, 308778, TH5 etc. Also proven at .430" valve lift using roller rockers, to 6000 rpm, Set £18.00 + VAT

**Made To A Standard - Not To A Price**

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