

## OPTIONAL CAMSHAFTS FOR THE TWINCAM

The TwinCam is a well tuned engine in stock form. Yet it is "torquey", economical, long lived, and relatively quiet. The stock camshaft gives 0.350" lift and 262 degrees duration. Any cam grinder will tell you that this is fairly mild. (The Cortina GT uses a 272 degree cam.) For those interested in more, there follows a list of available regrinds. The ones with asterisks can be investigated further by talking to the clubmembers noted.

The camming of an engine does more to increase horsepower than any other engine modification. However, avoid choosing a cam too radical for your purpose. As opinions vary as to what is "tractable", it is best to evaluate the type of cam on a driving spectrum varying from commuting in stop-and-go traffic to road racing.

The potential gains listed are realistic assuming an engine of 90 to 100 BHP in stock form. Claims of 40+ HP gain and ease of driving in traffic are unfounded. The two listings at the top of the list were selected on the basis of their availability and proven performance.

COSWORTH		*Dill, Garrison, McClung		
Camshaft	Lift/Duration	Potential Gain	Modifications	Manners
CPL2	.350/274°	15 HP	None	Tractable
L-2	.350/304°	30 HP	Head Kit	Lopes
L-1	.400/304°	40 HP	Spring Kit	Good Top
NORRIS PERFORMANCE PRODUCTS		*Kouba, Emus, Gallagher		
Camshaft	Lift/Duration	Potential Gain	Modifications	Manners
407S	.407/280°	25 HP	Head Kit	Lots of Torque
439S	.439/300°	50 HP	Spring Kit	Road Race
ALLARD				
Camshaft	Lift/Duration	Potential Gain	Modifications	Manners
AMC8	Probably as	30 HP	Unknown	Full race
AMC9	L-1, L-2	50 HP	Unknown	
WINKELMAN				
WE6250D	Unknown	10 HP	Probably none	Unknown
Iskenderian				
Camshaft	Lift/Duration	Potential Gain	Modifications	Manners
Z197	.376/298°	Unknown	Unknown	Unknown
ZM74S	.372/276°			
ZN74L	.377/286°			
Z2273	.413/306°			
Z194B	.433/328°			

The total cost of setting up the TwinCam for one of these camshafts may be deceptive as there are usually carburation and exhaust system changes accompanying the modification. The carburetor changes on Weber cars entail \$5-\$35 for parts, while the exhaust probably will require a completely new system: \$80-\$150. NOTE: The more radical cams (Cosworth L-1, L-2 for instance) often will NOT even run with the stock cast iron exhaust manifold and muffler system. To these costs should be added a valve job and some head work such as matching the carburetors to the inlet manifolds. Of course you may eliminate labor charges if you do the work yourself. Several clubmembers have with satisfactory results. A final note is that while some of the cams listed are race cams capable of 8000 RPM or more, costs have been set within an engine operating range of about 7000 RPM. The stock camshaft is vulnerable above this range without further work and associated costs.

#### SOURCES

Cosworth Engineering Ltd.  
St. James Mill Road  
Northampton, NNS 5JJ England  
Price: \$100-\$140 outright  
+ shipping, duty  
or from R.R.S. Engineering  
329 Cedar, Inglewood  
(213) 674-7667

Norris Performance Products  
14762 Calvert  
Van Nuys, CA 91401  
Price: \$80 regrind, less 20%  
discount to Lotus/West  
members

Allard Performance Centre  
51 Upper Richmond Road  
Putney, London SW15 England  
Price \$85 outright + shipping

R. Winkelman Racing  
200 Caledonia Street  
Sausalito, CA  
Price: \$165 outright

Ed Iskenderian  
16020 S. Broadway  
Gardena, CA 90248  
Price: \$140 regrind

NOTE: Further reading is suggested before converting your engine.  
Try: Tuning TwinCam Fords, David Vizard, Speed Sport Motorbooks,  
available from Classic Motorbooks, 3106 West Lake Street,  
Minneapolis, Minn., 55416, Price \$6.95.