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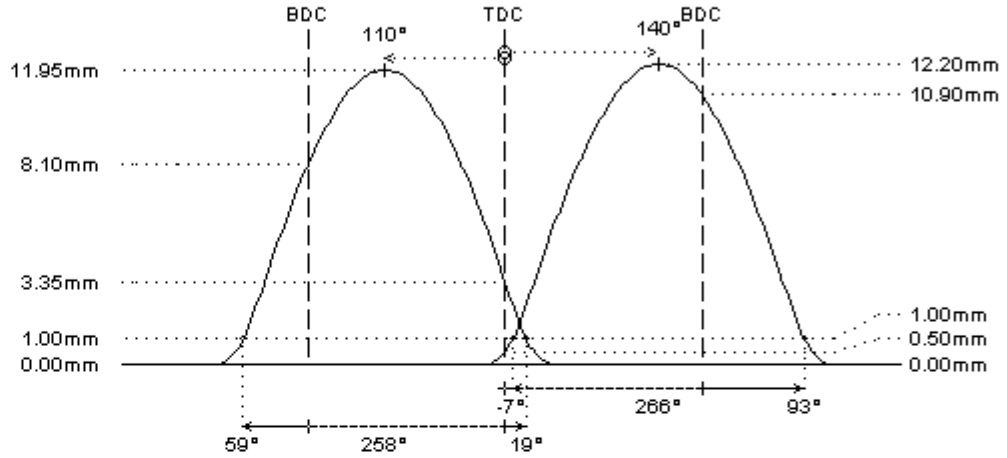
tarmac rally - race

Renault F4R.830 Clio III (VVT in, 197hp)

I-4cyl 2.0L 16v DOHC (RPRH/RPRH)

	intake	exhaust
camshaft data:		
lash ramp	: hydro	hydro
duration @ 0.1mm	: 300°	293°
duration @ 1.0mm	: 266°	258°
valve lift	: 12.20mm	11.95mm
cam lift	: 6.15mm	6.05mm
lobe angle	: 140°	110°
timing @ 1.0mm	: -7° / 93°	59° / 19°
valve lift @ TDC	: 0.50mm	3.35mm
parts setup:		
cam wheels :	:	:
follower	: O.E.M.	: O.E.M.
valve lash	: O.E.M.	: O.E.M.
valve	: O.E.M.	: O.E.M.
valve locks	: O.E.M.	: O.E.M.
upper retainer	: O.E.M.	: O.E.M.
lower retainer	: O.E.M.	: O.E.M.
exterior spring	: PAC-E99862	: PAC-E99862
interior spring		
fitted load / length	: 31kg @ 34.5mm	: 33kg @ 34.0mm
max. load / lift	: 85kg @ 12.5mm	: 85kg @ 12.0mm

REMARKS :



REMARKS :

\# - camshafts for use with VVT on intake (like original)
- adjustable sensor ring [ref. 93-55001] on intake camshaft included

\# The VVT system on the intake camshaft changes the cam timing continuously (and so the lift at TDC):
- 1st intake valve: 140° (disengaged) // 97° (engaged)
- 2nd intake valve: 144° (disengaged) // 101° (engaged)
- 1st exhaust valve: 110° (no VVT)
- 2nd exhaust valve: 106° (no VVT)

The centerlines are identical to the original camshafts.
Please make sure there is enough distance between valve and piston **when the VVT system is engaged**.

\# VVT reprogramming, operating range adjustment or even eliminating the VVT system should be considered for camshafts with increased duration

\# FOR COMPETITION APPLICATIONS ONLY. Following details must be verified:
- the camshafs must turn smooth in the cylinderhead, provide free travel by machining where needed
- distance between valve seal and retainer at full lift must be 0.6mm at least
- minimum valve spring travel of 1.0mm at full lift must be provided
- distance between valve and piston 1.0mm (pref. 1.5mm). check 5-15° before TDC on exhaust, and after TDC on intake

\# ONLY for use in competition engines with independent engine management (throttle position sensor) or carburettors