

# 5504406

tarmac rally - race

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

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



### intake

### exhaust

#### camshaft data:

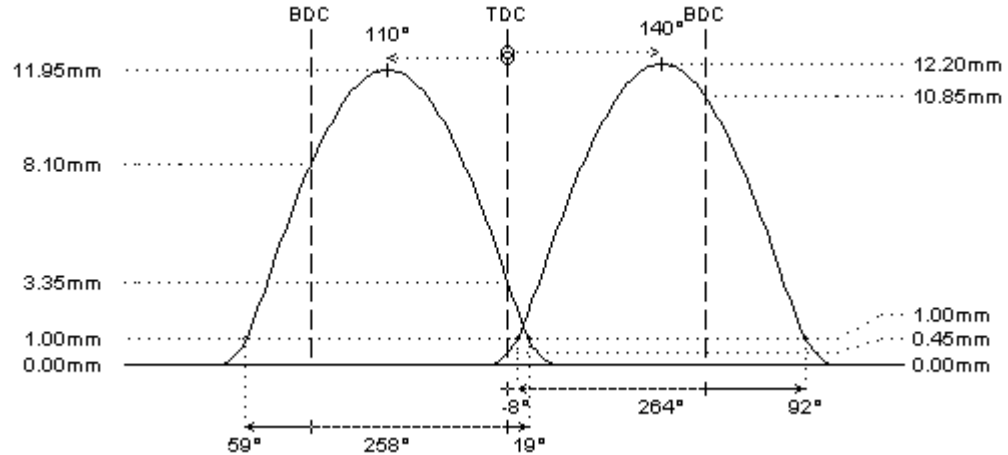
lash ramp	: hydro	hydro
duration @ 0.1mm	: 300°	293°
duration @ 1.0mm	: 266°	258°
valve lift	: 12.20mm	11.95mm
cam lift	: 6.15mm	6.05mm
lobe angle	: 140°	110°
timing @ 1.0mm	: -7° / 93°	59° / 19°
valve lift @ TDC	: 0.50mm	3.30mm

#### 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 :



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- # - camshafts for use with VVT on intake (like original)  
- adjustable sensor ring [ref. 99025] 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: 143° (disengaged) // 100° (engaged)
  - 2nd intake valve: 147° (disengaged) // 104° (engaged)
  - 1st exhaust valve: 108° (no VVT)
  - 2nd exhaust valve: 104° (no VVT)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 camshafts 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 carburetors