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tarmac rally - race

Opel X16XEL small block ecotec (1.4L-1.6L-X18XE1-Z18XE)

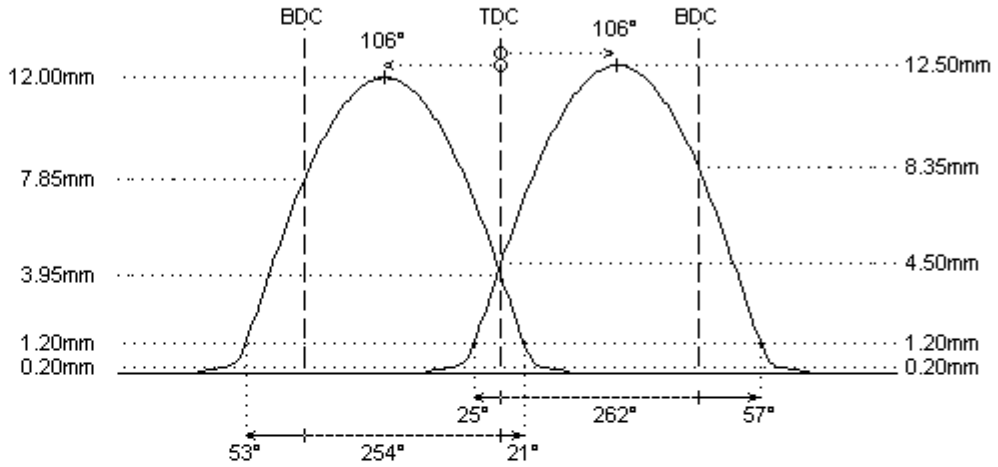
I-4cyl 1.6L 16v DOHC (DTH/DTH)

	intake	exhaust
camshaft data:		
lash ramp	: 0.20mm	0.20mm
duration @ 0.1mm	: 289°	280°
duration @ 1.0mm	: 262°	254°
valve lift	: 12.50mm	12.00mm
cam lift	:	
lobe angle	: 106°	106°
timing @ 1.0mm	: 25° / 57°	53° / 21°
valve lift @ TDC	: 4.50mm	3.95mm
parts setup:		
cam wheels :	: CTOP015	: CTOP015
follower	: CC004	: CC004
valve lash	: TS101	: TS101
valve	: O.E.M.	: O.E.M.
valve locks	: O.E.M.	: O.E.M.
upper retainer	: 99245/H	: 99245/H
lower retainer	: remove	: remove
exterior spring	: PAC-E92009	: PAC-E92009
interior spring	: PAC-I92009	: PAC-I92009
fitted load / length	: 33kg @ 34.0mm	: 33kg @ 34.0mm
max. load / lift	: 94kg @ 12.5mm	: 94kg @ 12.5mm

REMARKS :

if required, machine cylinder head and / or use solid shims to adjust spring load

for engines with 6mm valves (not adapted for X18XE1, Z18XE: 5mm valves!)



REMARKS :

- camshafts for use in **1.4L-1.6L-X18XE1-Z18XE** short block 'ecotec' engines
- CAUTION: Opel has fitted different types of sprockets and camshafts with different dowel pin positions and cam lobes. Therefore it is required to check the std camshafts before ordering for sports applications!

- valve clearance is to be adjusted using mechanical lash caps
- please make sure that the lash cap does not touch the valve locks !

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