

O.E.M.

Hyundai G4GF

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



intake	exhaust
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camshaft data:

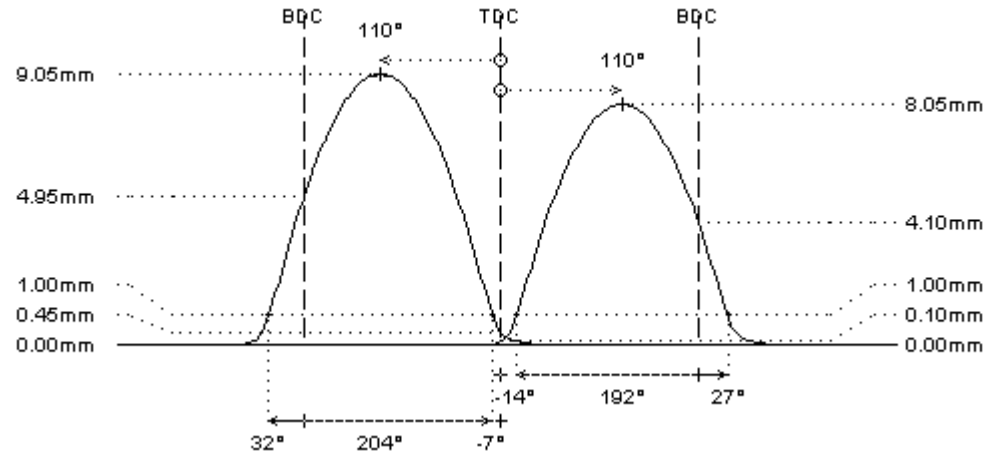
lash ramp	: hydro	hydro
duration @ 0.1mm	: 234°	247°
duration @ 1.0mm	: 193°	205°
valve lift	: 8.05mm	9.05mm
cam lift	:	
lobe angle	: 110°	110°
timing @ 1.0mm	: -14° / 27°	32° / -7°
valve lift @ TDC	: 0.10mm	0.45mm

parts setup:

cam wheels :	:	:
follower :		: 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 :	O.E.M.	: O.E.M.
interior spring :		

fitted load / length	: 25kg @ 37.2mm	: 27kg @ 36.5mm
max. load / lift	: 60kg @ 10.0mm	: 60kg @ 9.5mm

REMARKS :



REMARKS :

The exact valve timing data of the original camshafts are not known. Valve timing data are illustrated on estimated peak angle of 110°. The actual valve timing in the engine may be different, as well as the indicated lift at TDC.

2701802

sport

Hyundai G4GF

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



intake

exhaust

camshaft data:

lash ramp : hydro
duration @ 0.1mm : 250°
duration @ 1.0mm : 208°
valve lift : 9.35mm
cam lift :
lobe angle : 110°
timing @ 1.0mm : -6° / 34°
valve lift @ TDC : 0.50mm

hydro
250°
208°
9.35mm

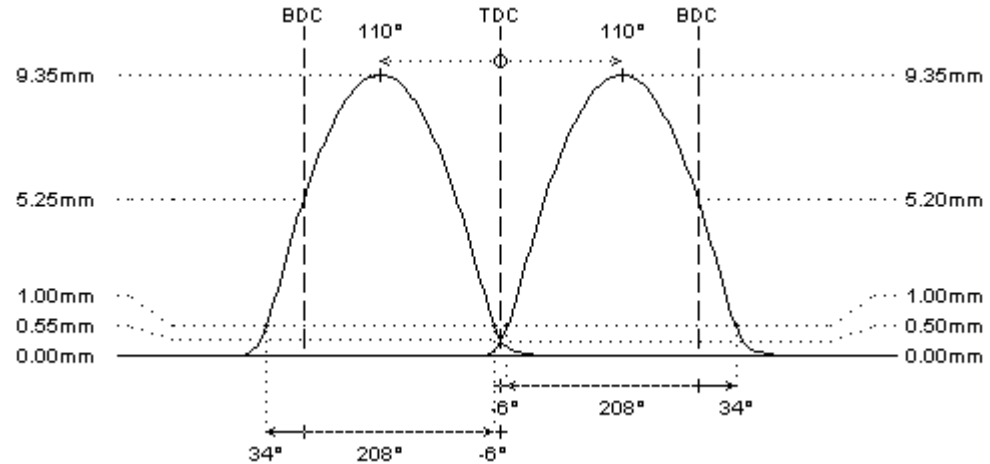
110°
34° / -6°
0.55mm

parts setup:

cam wheels :	:	:
follower :	🔍	: 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 :	O.E.M.	: O.E.M.
interior spring :		

fitted load / length :	25kg @ 37.2mm	: 27kg @ 36.5mm
max. load / lift :	60kg @ 10.0mm	: 60kg @ 9.5mm

REMARKS :



REMARKS :

2701803

hot street - dirt track

Hyundai G4GF

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



intake

exhaust

camshaft data:

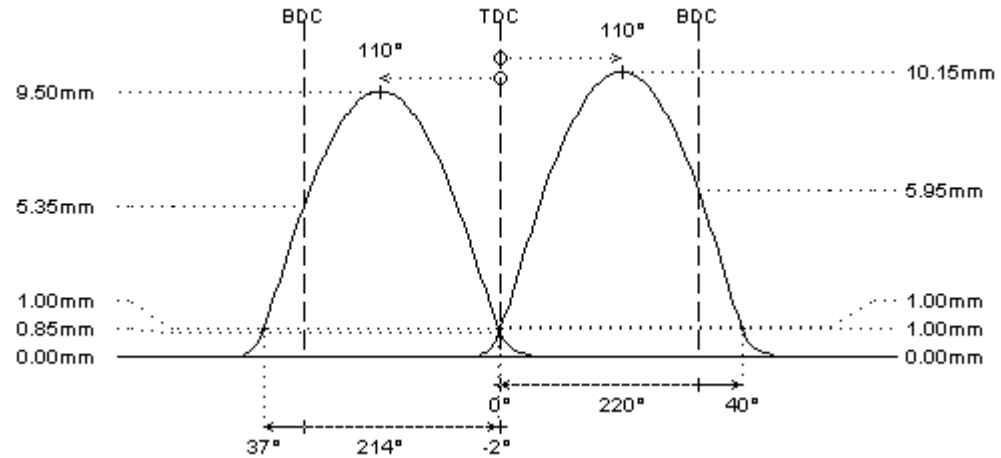
lash ramp	: hydro	hydro
duration @ 0.1mm	: 257°	252°
duration @ 1.0mm	: 220°	215°
valve lift	: 10.15mm	9.50mm
cam lift	:	
lobe angle	: 110°	110°
timing @ 1.0mm	: -0° / 40°	37° / -2°
valve lift @ TDC	: 1.00mm	0.85mm

parts setup:

cam wheels :	:	:
follower :	🔍	: 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 :	O.E.M.	: O.E.M.
interior spring :		

fitted load / length	: 25kg @ 37.2mm	: 27kg @ 36.5mm
max. load / lift	: 60kg @ 10.0mm	: 60kg @ 9.5mm

REMARKS :



REMARKS :

ECU reprogramming required

2701804

hot street - dirt track

Hyundai G4GF

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



intake




exhaust

camshaft data:

lash ramp : hydro
duration @ 0.1mm : 272°
duration @ 1.0mm : 233°
valve lift : 11.00mm
cam lift :
lobe angle : 108°
timing @ 1.0mm : 8° / 45°
valve lift @ TDC : 2.05mm

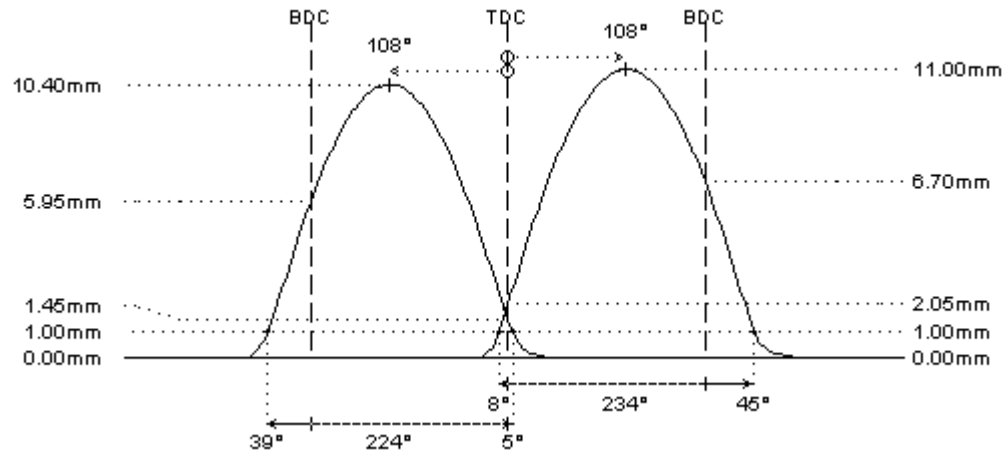
hydro
259°
224°
10.40mm
:
108°
39° / 5°
1.45mm

parts setup:

cam wheels :	:	:
follower :		: 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-S90019	:  PAC-S90019
interior spring :	:	:

fitted load / length :	25kg @ 37.2mm	: 27kg @ 36.5mm
max. load / lift :	73kg @ 12.5mm	: 73kg @ 12.0mm

REMARKS :



REMARKS :

- # 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 dirt track applications and pro street use with adjustable engine management or carburetors

2701805

tarmac rally - race

Hyundai G4GF

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



intake

exhaust

camshaft data:

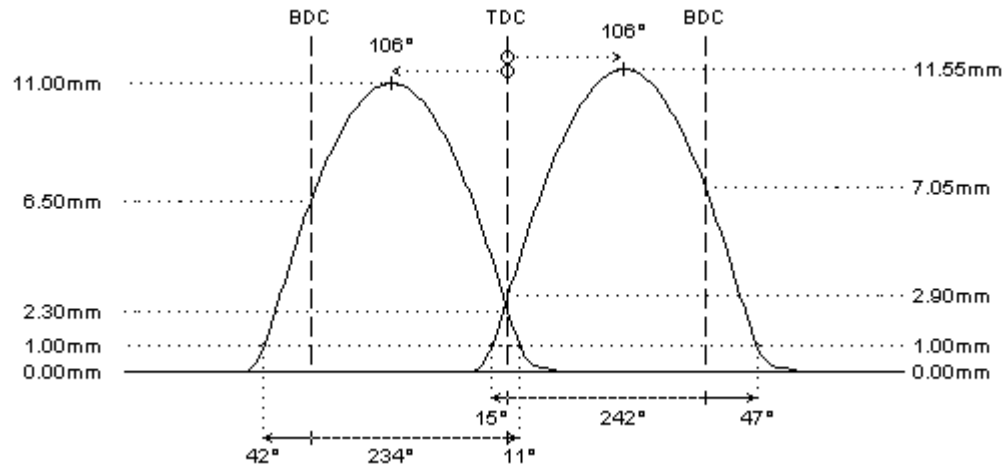
lash ramp	: hydro	hydro
duration @ 0.1mm	: 283°	272°
duration @ 1.0mm	: 242°	233°
valve lift	: 11.55mm	11.00mm
cam lift	:	
lobe angle	: 106°	106°
timing @ 1.0mm	: 15° / 47°	42° / 11°
valve lift @ TDC	: 2.90mm	2.30mm

parts setup:

cam wheels :	:	:
follower	:	: 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-S90019	: PAC-S90019
interior spring	:	:

fitted load / length	: 25kg @ 37.2mm	: 27kg @ 36.5mm
max. load / lift	: 73kg @ 12.5mm	: 73kg @ 12.0mm

REMARKS :



REMARKS :

- # 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

2701850

full race

Hyundai G4GF

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



intake

exhaust

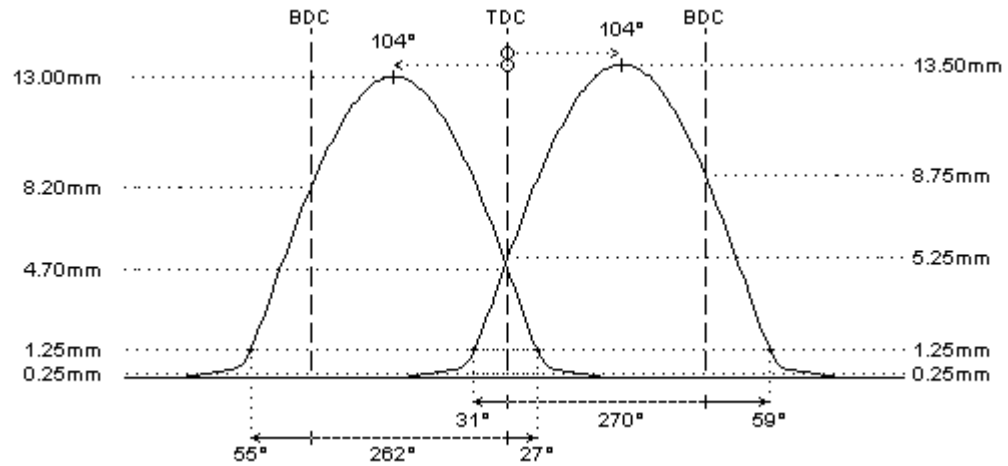
camshaft data:

lash ramp	: 0.25mm	0.25mm
duration @ 0.1mm	: 317°	305°
duration @ 1.0mm	: 270°	262°
valve lift	: 13.50mm	13.00mm
cam lift	:	
lobe angle	: 104°	104°
timing @ 1.0mm	: 31° / 59°	55° / 27°
valve lift @ TDC	: 5.25mm	4.70mm

parts setup:

cam wheels :	:	:
follower	: CC002	: CC002
valve lash	: TS101	: TS101
valve	: O.E.M.	: O.E.M.
valve locks	: O.E.M.	: O.E.M.
upper retainer	: 99317/s	: 99317/s
lower retainer	: not available	: not available
exterior spring	: PAC-E12009	: PAC-E12009
interior spring	: PAC-I12009	: PAC-I12009
fitted load / length	: 36kg @ 33.3mm	: 38kg @ 32.8mm
max. load / lift	: 106kg @ 14.0mm	: 106kg @ 13.5mm

REMARKS :



REMARKS :

- # valve clearance is to be adjusted using mechanical lash caps. these can have different shapes according the application:
 - plates available in different diameters and thickness
 - cups for different valve stem diameters. these center on either tappet or valve stem
 - other specific shapes available on request
- # 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

2701852

hot street - dirt track

Hyundai G4GF

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



intake

exhaust

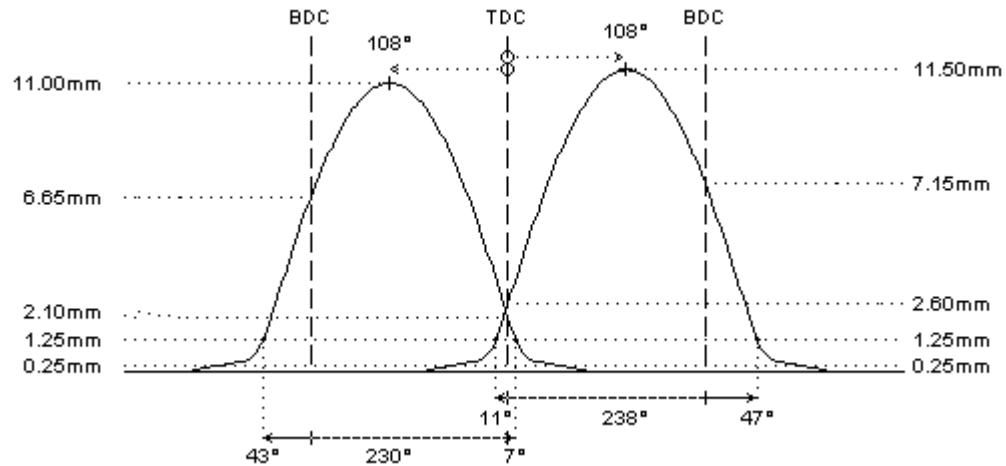
camshaft data:

lash ramp	: 0.25mm	0.25mm
duration @ 0.1mm	: 284°	278°
duration @ 1.0mm	: 238°	230°
valve lift	: 11.50mm	11.00mm
cam lift	:	
lobe angle	: 108°	108°
timing @ 1.0mm	: 11° / 47°	43° / 7°
valve lift @ TDC	: 2.60mm	2.10mm

parts setup:

cam wheels :	:	:
follower	: CC002	: CC002
valve lash	: TS101	: TS101
valve	: O.E.M.	: O.E.M.
valve locks	: O.E.M.	: O.E.M.
upper retainer	: 99317/s	: 99317/s
lower retainer	: not available	: not available
exterior spring	: PAC-E12009	: PAC-E12009
interior spring	: PAC-I12009	: PAC-I12009
fitted load / length	: 36kg @ 33.3mm	: 38kg @ 32.8mm
max. load / lift	: 106kg @ 14.0mm	: 106kg @ 13.5mm

REMARKS :



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- # valve clearance is to be adjusted using mechanical lash caps. these can have different shapes according the application:
 - plates available in different diameters and thickness
 - cups for different valve stem diameters. these center on either tappet or valve stem
 - other specific shapes available on request
- # 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

2701853

tarmac rally - race

Hyundai G4GF

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



intake

exhaust

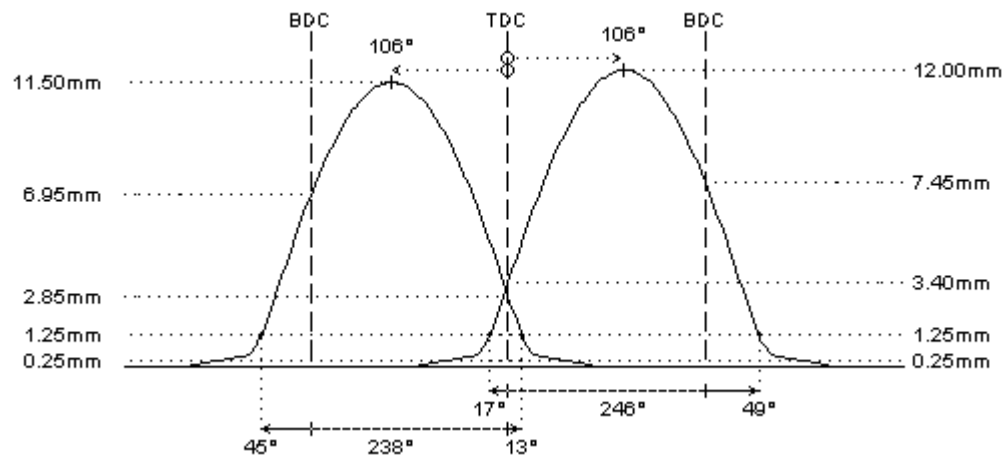
camshaft data:

lash ramp	: 0.25mm	0.25mm
duration @ 0.1mm	: 293°	284°
duration @ 1.0mm	: 246°	238°
valve lift	: 12.00mm	11.50mm
cam lift	:	
lobe angle	: 106°	106°
timing @ 1.0mm	: 17° / 49°	45° / 13°
valve lift @ TDC	: 3.40mm	2.85mm

parts setup:

cam wheels :	:	:
follower	: CC002	: CC002
valve lash	: TS101	: TS101
valve	: O.E.M.	: O.E.M.
valve locks	: O.E.M.	: O.E.M.
upper retainer	: 99317/s	: 99317/s
lower retainer	: not available	: not available
exterior spring	: PAC-E12009	: PAC-E12009
interior spring	: PAC-I12009	: PAC-I12009
fitted load / length	: 36kg @ 33.3mm	: 38kg @ 32.8mm
max. load / lift	: 106kg @ 14.0mm	: 106kg @ 13.5mm

REMARKS :



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 - cups for different valve stem diameters. these center on either tappet or valve stem
 - other specific shapes available on request
- # 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 carburettors

2701854

tarmac rally - race

Hyundai G4GF

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



intake

exhaust

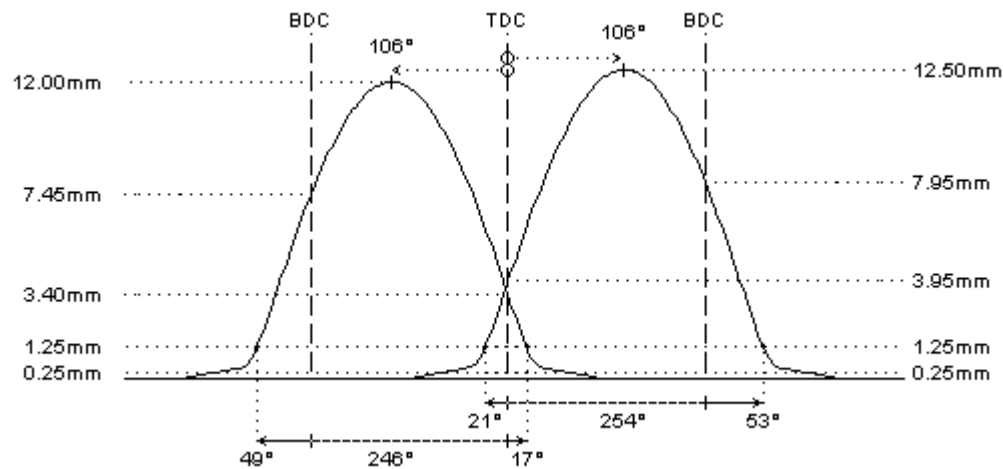
camshaft data:

lash ramp	: 0.25mm	0.25mm
duration @ 0.1mm	: 301°	293°
duration @ 1.0mm	: 254°	246°
valve lift	: 12.50mm	12.00mm
cam lift	:	
lobe angle	: 106°	106°
timing @ 1.0mm	: 21° / 53°	49° / 17°
valve lift @ TDC	: 3.95mm	3.40mm

parts setup:

cam wheels :	:	:
follower	: CC002	: CC002
valve lash	: TS101	: TS101
valve	: O.E.M.	: O.E.M.
valve locks	: O.E.M.	: O.E.M.
upper retainer	: 99317/s	: 99317/s
lower retainer	: not available	: not available
exterior spring	: PAC-E12009	: PAC-E12009
interior spring	: PAC-I12009	: PAC-I12009
fitted load / length	: 36kg @ 33.3mm	: 38kg @ 32.8mm
max. load / lift	: 106kg @ 14.0mm	: 106kg @ 13.5mm

REMARKS :



REMARKS :

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 - other specific shapes available on request
- # 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 carburettors

2701855

tarmac rally - race

Hyundai G4GF

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



intake

exhaust

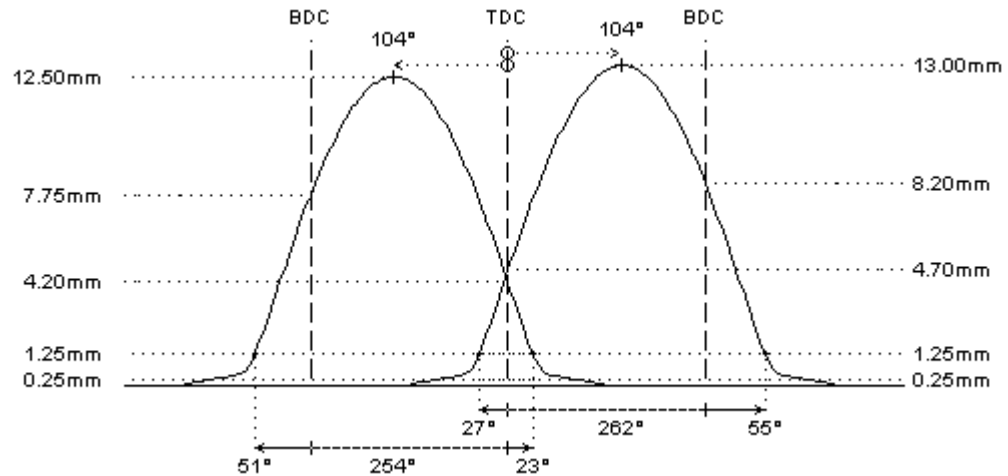
camshaft data:

lash ramp	: 0.25mm	0.25mm
duration @ 0.1mm	: 305°	301°
duration @ 1.0mm	: 262°	254°
valve lift	: 13.00mm	12.50mm
cam lift	:	
lobe angle	: 104°	104°
timing @ 1.0mm	: 27° / 55°	51° / 23°
valve lift @ TDC	: 4.70mm	4.20mm

parts setup:

cam wheels :	:	:
follower	: CC002	: CC002
valve lash	: TS101	: TS101
valve	: O.E.M.	: O.E.M.
valve locks	: O.E.M.	: O.E.M.
upper retainer	: 99317/s	: 99317/s
lower retainer	: not available	: not available
exterior spring	: PAC-E12009	: PAC-E12009
interior spring	: PAC-I12009	: PAC-I12009
fitted load / length	: 36kg @ 33.3mm	: 38kg @ 32.8mm
max. load / lift	: 106kg @ 14.0mm	: 106kg @ 13.5mm

REMARKS :



REMARKS :

- # valve clearance is to be adjusted using mechanical lash caps. these can have different shapes according the application:
 - plates available in different diameters and thickness
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 - other specific shapes available on request
- # 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 carburettors