

# 7900504

full race

Volvo B234

I-4cyl 2.3L 16v DOHC (DTH/DTH)



### intake

### exhaust

#### camshaft data:

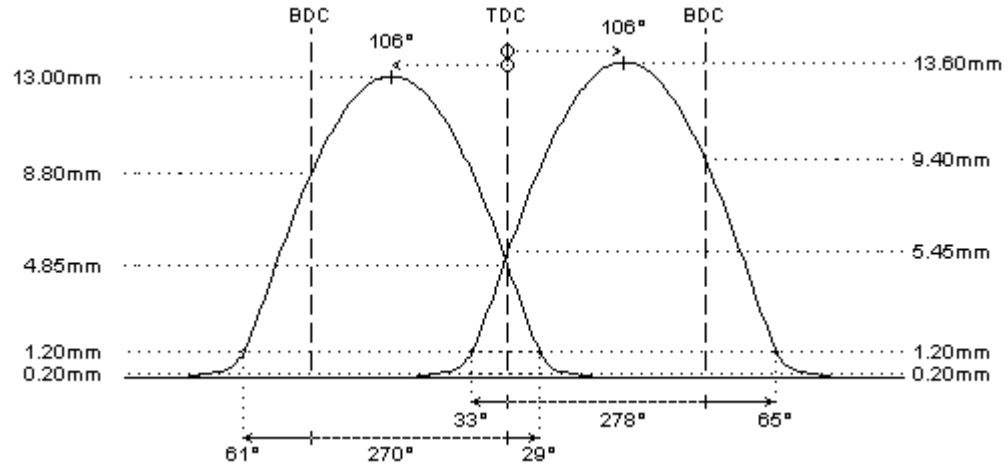
lash ramp	: 0.20mm	0.20mm
duration @ 0.1mm	: 322°	312°
duration @ 1.0mm	: 278°	270°
valve lift	: 13.60mm	13.00mm
cam lift	:	
lobe angle	: 106°	106°
timing @ 1.0mm	: 33° / 65°	61° / 29°
valve lift @ TDC	: 5.45mm	4.85mm

#### parts setup:

cam wheels :	:  CTVO023	:  CTVO023
follower	:  CC005	:  CC005
valve lash	:  TS102	:  TS102
valve	: O.E.M.	: O.E.M.
valve locks	: O.E.M.	: O.E.M.
upper retainer	:  99322/s	:  99322/s
lower retainer	: 99475	: 99475
exterior spring	:  PAC-E95009	:  PAC-E95009
interior spring	:  PAC-I95009	:  PAC-I95009

fitted load / length	: 35kg @ 35.0mm	: 37kg @ 34.5mm
max. load / lift	: 115kg @ 14.5mm	: 115kg @ 14.0mm

#### 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

# 7900513

tarmac rally - race

Volvo B234

I-4cyl 2.3L 16v DOHC (DTH/DTH)



## intake

## exhaust

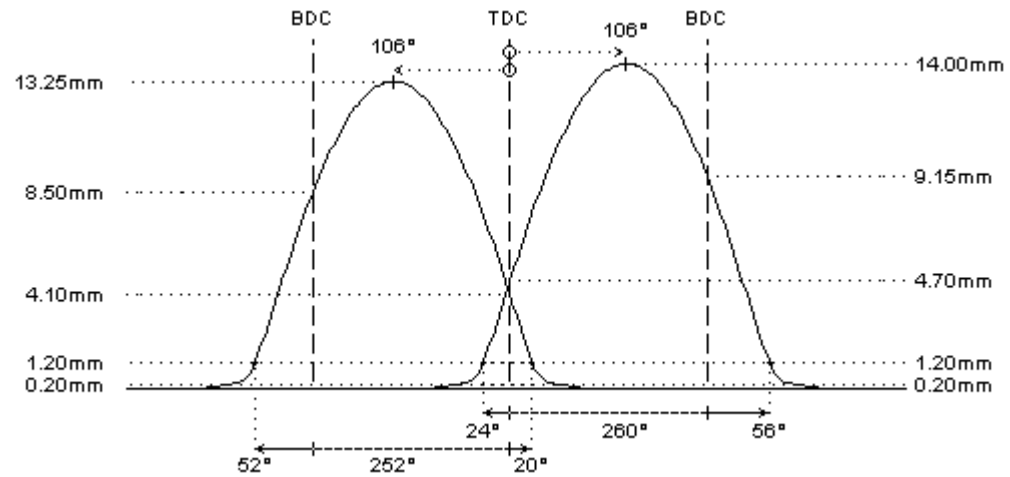
### camshaft data:

lash ramp	: 0.20mm	0.20mm
duration @ 0.1mm	: 294°	286°
duration @ 1.0mm	: 260°	252°
valve lift	: 14.00mm	13.25mm
cam lift	:	
lobe angle	: 106°	106°
timing @ 1.0mm	: 24° / 56°	52° / 20°
valve lift @ TDC	: 4.70mm	4.10mm

### parts setup:

cam wheels :	: <b>CTVO023</b>	: <b>CTVO023</b>
follower	: <b>CC005</b>	: <b>CC005</b>
valve lash	: <b>TS102</b>	: <b>TS102</b>
valve	: O.E.M.	: O.E.M.
valve locks	: O.E.M.	: O.E.M.
upper retainer	: <b>99322/s</b>	: <b>99322/s</b>
lower retainer	: <b>99475</b>	: <b>99475</b>
exterior spring	: <b>PAC-E95009</b>	: <b>PAC-E95009</b>
interior spring	: <b>PAC-I95009</b>	: <b>PAC-I95009</b>
fitted load / length	: 35kg @ 35.0mm	: 37kg @ 34.5mm
max. load / lift	: 115kg @ 14.5mm	: 115kg @ 14.0mm

### 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

# 7900526

turbo conversion

Volvo B234

I-4cyl 2.3L 16v DOHC (DTH/DTH)



### intake

### exhaust

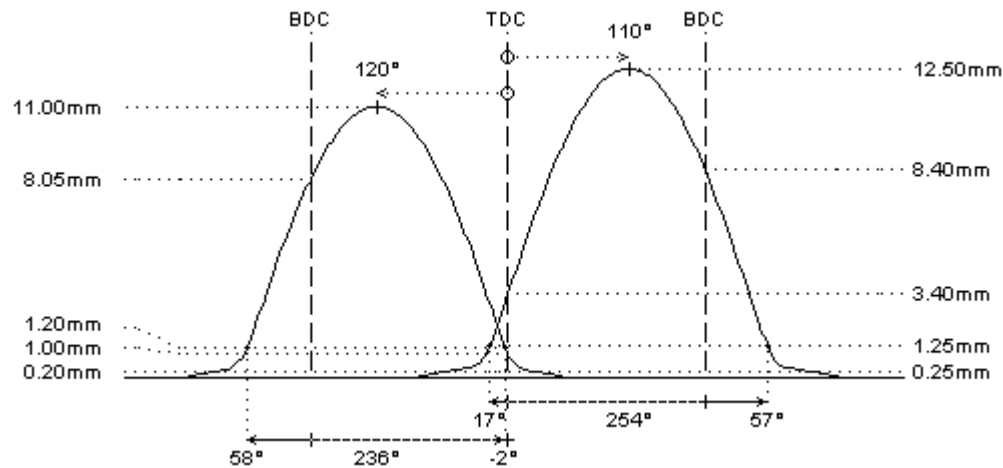
#### camshaft data:

lash ramp	: 0.25mm	0.20mm
duration @ 0.1mm	: 301°	274°
duration @ 1.0mm	: 254°	236°
valve lift	: 12.50mm	11.00mm
cam lift	:	
lobe angle	: 110°	120°
timing @ 1.0mm	: 17° / 57°	58° / -2°
valve lift @ TDC	: 3.40mm	1.00mm

#### parts setup:

cam wheels :	:  CTVO023	:  CTVO023
follower	:  CC005	:  CC005
valve lash	:  TS102	:  TS102
valve	: O.E.M.	: O.E.M.
valve locks	: O.E.M.	: O.E.M.
upper retainer	:  99322/s	:  99322/s
lower retainer	: 99475	: 99475
exterior spring	:  PAC-E95009	:  PAC-E95009
interior spring	:  PAC-I95009	:  PAC-I95009
fitted load / length	: 35kg @ 35.0mm	: 37kg @ 34.5mm
max. load / lift	: 115kg @ 14.5mm	: 115kg @ 14.0mm

#### 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
- # for TURBO conversion (atmospheric to turbo)

# 7900528

hot street - dirt track

Volvo B234

I-4cyl 2.3L 16v DOHC (DTH/DTH)



### intake

### exhaust

#### camshaft data:

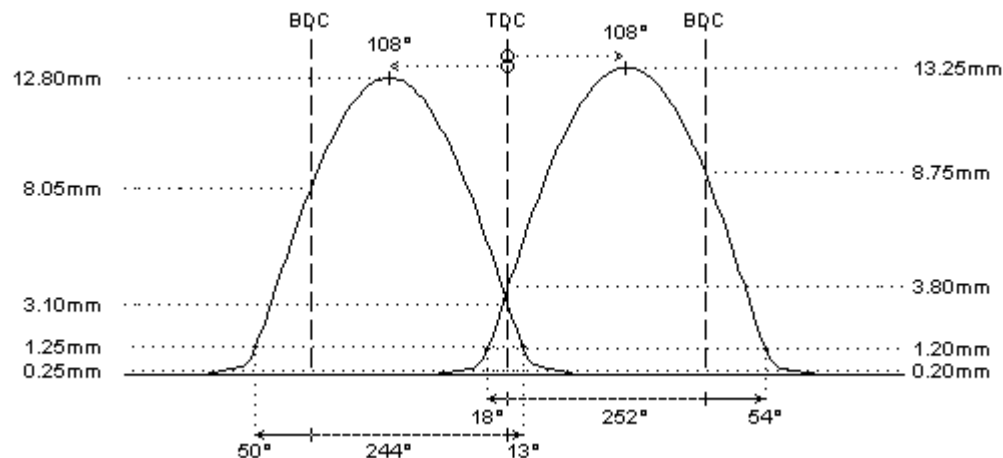
lash ramp	: 0.20mm	0.25mm
duration @ 0.1mm	: 286°	279°
duration @ 1.0mm	: 252°	243°
valve lift	: 13.25mm	12.80mm
cam lift	:	
lobe angle	: 108°	108°
timing @ 1.0mm	: 18° / 54°	50° / 13°
valve lift @ TDC	: 3.80mm	3.10mm

#### parts setup:

cam wheels :	:  CTVO023	:  CTVO023
follower	:  CC005	:  CC005
valve lash	:  TS102	:  TS102
valve	: O.E.M.	: O.E.M.
valve locks	: O.E.M.	: O.E.M.
upper retainer	:  99322/s	:  99322/s
lower retainer	: 99475	: 99475
exterior spring	:  PAC-E95009	:  PAC-E95009
interior spring	:  PAC-I95009	:  PAC-I95009

fitted load / length	: 35kg @ 35.0mm	: 37kg @ 34.5mm
max. load / lift	: 115kg @ 14.5mm	: 115kg @ 14.0mm

#### 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

# 7900529

hot street - dirt track

Volvo B234

I-4cyl 2.3L 16v DOHC (DTH/DTH)



### intake

### exhaust

#### camshaft data:

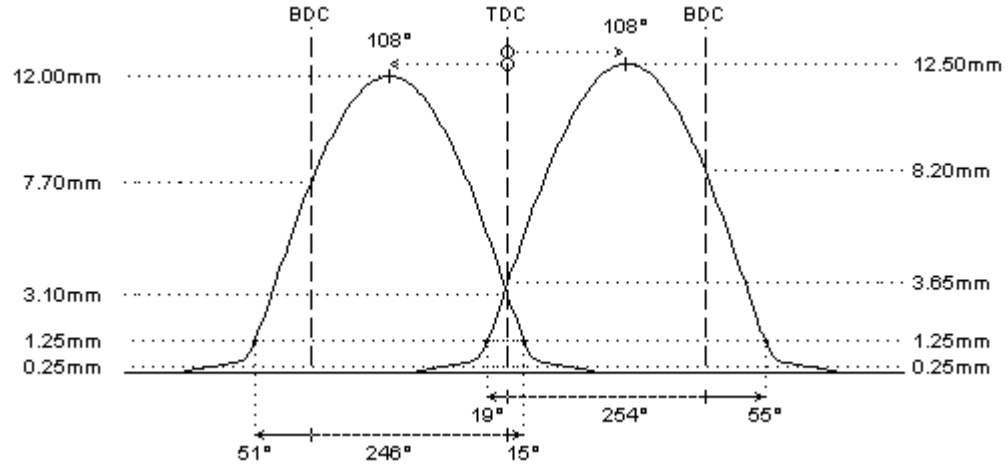
lash ramp	: 0.25mm	0.25mm
duration @ 0.1mm	: 301°	293°
duration @ 1.0mm	: 254°	246°
valve lift	: 12.50mm	12.00mm
cam lift	:	
lobe angle	: 108°	108°
timing @ 1.0mm	: 19° / 55°	51° / 15°
valve lift @ TDC	: 3.65mm	3.10mm

#### parts setup:

cam wheels :	:  CTVO023	:  CTVO023
follower	:  CC005	:  CC005
valve lash	:  TS102	:  TS102
valve	: O.E.M.	: O.E.M.
valve locks	: O.E.M.	: O.E.M.
upper retainer	:  99322/s	:  99322/s
lower retainer	: 99475	: 99475
exterior spring	:  PAC-E95009	:  PAC-E95009
interior spring	:  PAC-I95009	:  PAC-I95009

fitted load / length	: 35kg @ 35.0mm	: 37kg @ 34.5mm
max. load / lift	: 115kg @ 14.5mm	: 115kg @ 14.0mm

#### 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

# 7900530

tarmac rally - race

Volvo B234

I-4cyl 2.3L 16v DOHC (DTH/DTH)



### intake

### exhaust

#### camshaft data:

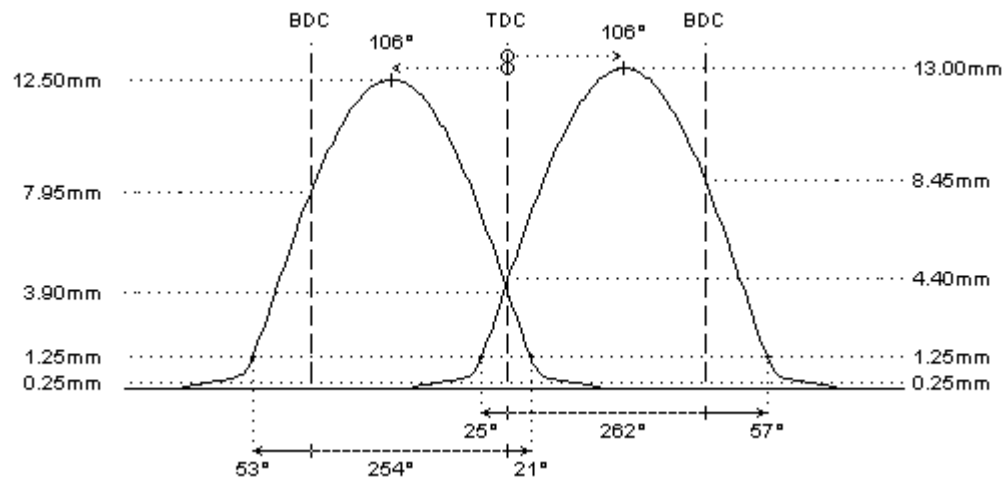
lash ramp	: 0.25mm	0.25mm
duration @ 0.1mm	: 305°	301°
duration @ 1.0mm	: 262°	254°
valve lift	: 13.00mm	12.50mm
cam lift	:	
lobe angle	: 106°	106°
timing @ 1.0mm	: 25° / 57°	53° / 21°
valve lift @ TDC	: 4.40mm	3.90mm

#### parts setup:

cam wheels :	:  CTVO023	:  CTVO023
follower	:  CC005	:  CC005
valve lash	:  TS102	:  TS102
valve	: O.E.M.	: O.E.M.
valve locks	: O.E.M.	: O.E.M.
upper retainer	:  99322/s	:  99322/s
lower retainer	: 99475	: 99475
exterior spring	:  PAC-E95009	:  PAC-E95009
interior spring	:  PAC-I95009	:  PAC-I95009

fitted load / length	: 35kg @ 35.0mm	: 37kg @ 34.5mm
max. load / lift	: 115kg @ 14.5mm	: 115kg @ 14.0mm

#### 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

# 7900531

tarmac rally - race

Volvo B234

I-4cyl 2.3L 16v DOHC (DTH/DTH)



## intake

## exhaust

### camshaft data:

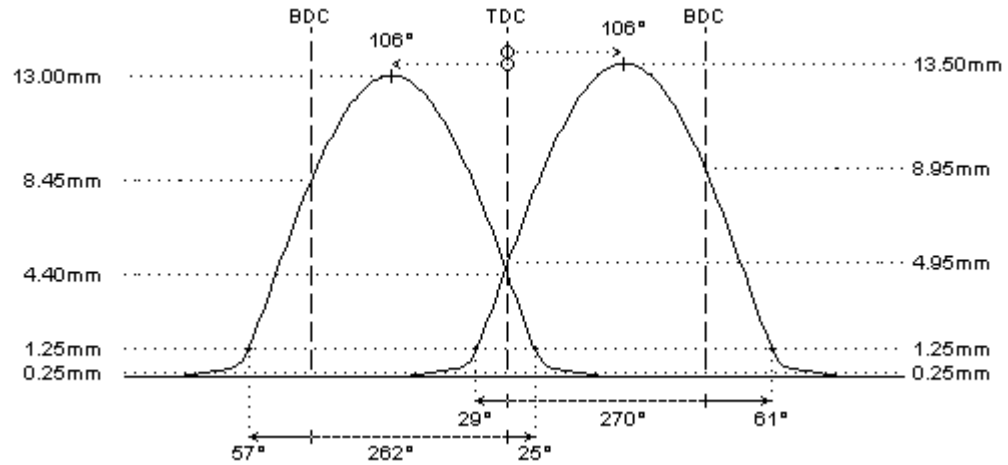
lash ramp	: 0.25mm	0.25mm
duration @ 0.1mm	: 317°	305°
duration @ 1.0mm	: 270°	262°
valve lift	: 13.50mm	13.00mm
cam lift	:	
lobe angle	: 106°	106°
timing @ 1.0mm	: 29° / 61°	57° / 25°
valve lift @ TDC	: 4.95mm	4.40mm

### parts setup:

cam wheels :	: <b>CTVO023</b>	: <b>CTVO023</b>
follower	: <b>CC005</b>	: <b>CC005</b>
valve lash	: <b>TS102</b>	: <b>TS102</b>
valve	: O.E.M.	: O.E.M.
valve locks	: O.E.M.	: O.E.M.
upper retainer	: <b>99322/s</b>	: <b>99322/s</b>
lower retainer	: <b>99475</b>	: <b>99475</b>
exterior spring	: <b>PAC-E95009</b>	: <b>PAC-E95009</b>
interior spring	: <b>PAC-I95009</b>	: <b>PAC-I95009</b>

fitted load / length	: 35kg @ 35.0mm	: 37kg @ 34.5mm
max. load / lift	: 115kg @ 14.5mm	: 115kg @ 14.0mm

### 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

# 7900601

sport

Volvo B234

I-4cyl 2.3L 16v DOHC (DTH/DTH)



**intake**                      **exhaust**

**camshaft data:**

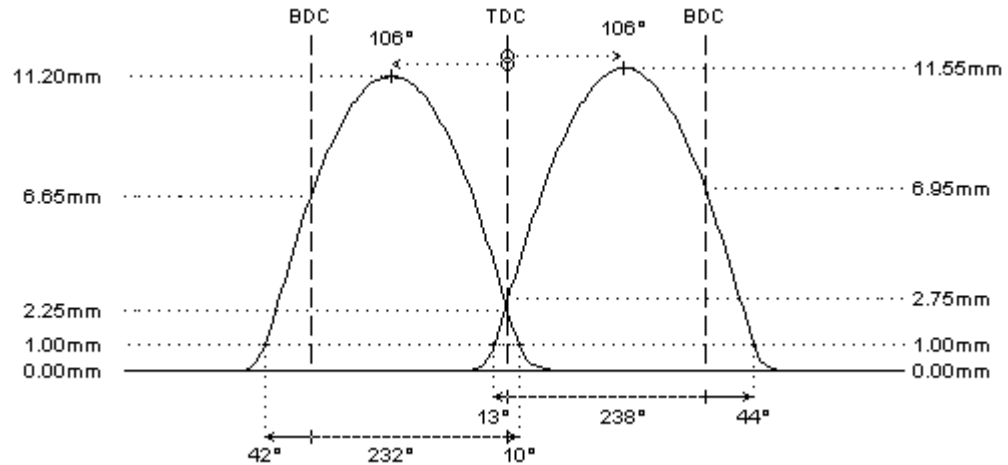
lash ramp	: hydro	hydro
duration @ 0.1mm	: 266°	267°
duration @ 1.0mm	: 237°	232°
valve lift	: 11.55mm	11.20mm
cam lift	:	
lobe angle	: 106°	106°
timing @ 1.0mm	: 13° / 44°	42° / 10°
valve lift @ TDC	: 2.75mm	2.25mm

**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	: O.E.M.	: O.E.M.
interior spring	:	:

fitted load / length	: 20kg @ 0.0mm	: 22kg @ 0.0mm
max. load / lift	: 64kg @ 11.5mm	: 64kg @ 11.0mm

**REMARKS :**



**REMARKS :**

# ECU reprogramming required



# 7900602

sport

Volvo B234

I-4cyl 2.3L 16v DOHC (DTH/DTH)



### intake

### exhaust

#### camshaft data:

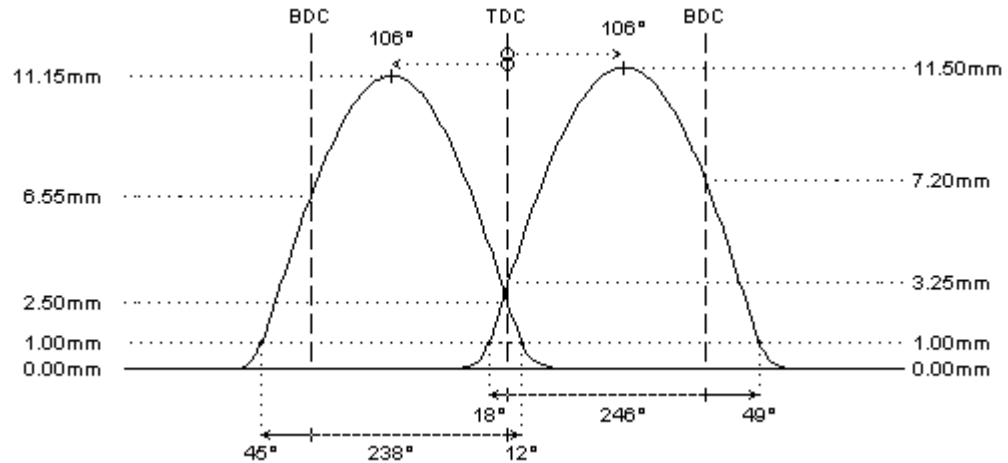
lash ramp	: hydro	hydro
duration @ 0.1mm	: 283°	275°
duration @ 1.0mm	: 247°	237°
valve lift	: 11.50mm	11.15mm
cam lift	:	
lobe angle	: 106°	106°
timing @ 1.0mm	: 18° / 49°	45° / 12°
valve lift @ TDC	: 3.25mm	2.50mm

#### parts setup:

cam wheels :	:  CTVO023	:  CTVO023
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	: O.E.M.	: O.E.M.
interior spring	:	

fitted load / length	: 20kg @ 0.0mm	: 22kg @ 0.0mm
max. load / lift	: 64kg @ 11.5mm	: 64kg @ 11.0mm

#### REMARKS :



#### REMARKS :

- # Distance between valve and piston should be 1.0mm at least:
  - check 5-15° after TDC on intake
  - check 5-15° before TDC on exhaustMachine pistons if required. Wrong installation can cause severe engine damage!
- # ONLY for dirt track applications and pro street use with adjustable engine management or carburetors

# 7900604

turbo conversion

Volvo B234

I-4cyl 2.3L 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 : 110°  
timing @ 1.0mm : 6° / 47°  
valve lift @ TDC : 1.80mm

hydro  
263°  
217°  
9.95mm  
:  
120°  
49° / -12°  
0.25mm

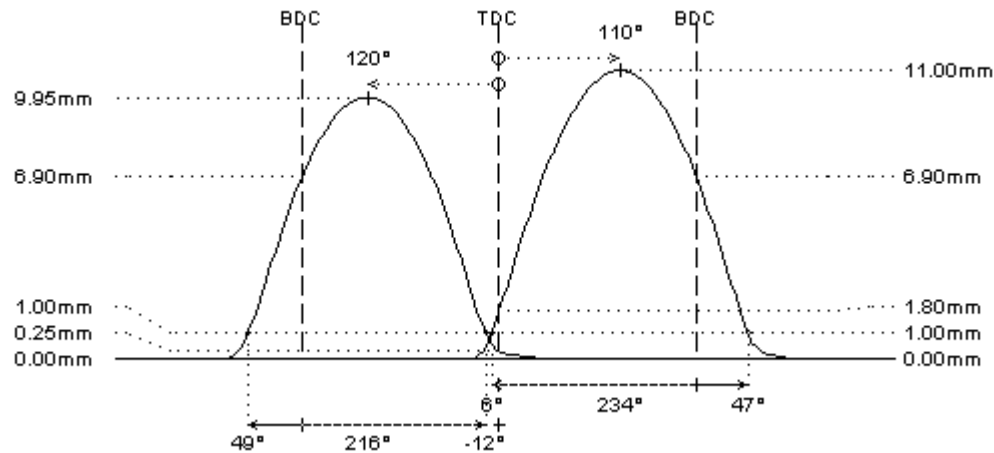
#### parts setup:

cam wheels : : CTVO023  
follower : : O.E.M.  
valve lash : : O.E.M.  
valve : : O.E.M.  
valve locks : : O.E.M.  
upper retainer : : O.E.M.  
lower retainer : : O.E.M.  
exterior spring : : O.E.M.  
interior spring : : O.E.M.

CTVO023  
O.E.M.  
O.E.M.  
O.E.M.  
O.E.M.  
O.E.M.  
O.E.M.  
O.E.M.

fitted load / length : 20kg @ 0.0mm : 22kg @ 0.0mm  
max. load / lift : 64kg @ 11.5mm : 64kg @ 11.0mm

#### REMARKS :



#### REMARKS :

# for TURBO conversion (atmospheric to turbo)

# 7900605

sport

Volvo B234

I-4cyl 2.3L 16v DOHC (DTH/DTH)



**intake**                      **exhaust**

**camshaft data:**

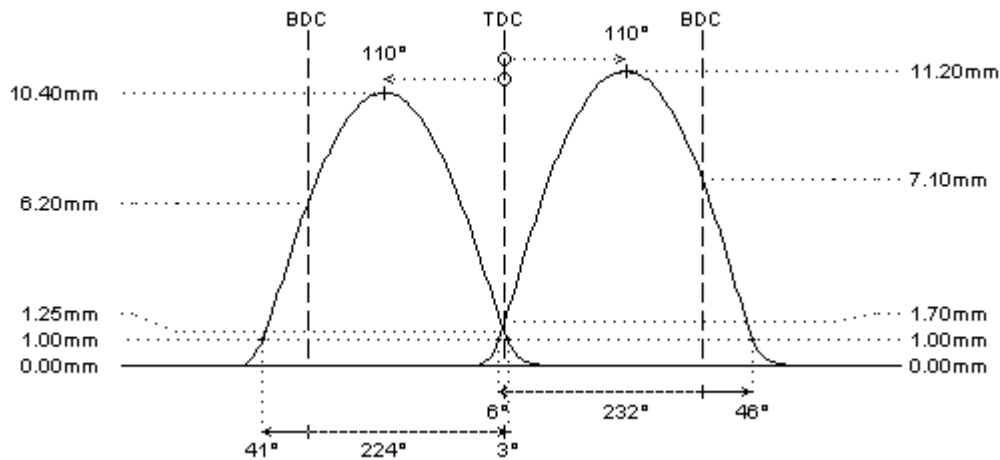
lash ramp	: hydro	hydro
duration @ 0.1mm	: 267°	259°
duration @ 1.0mm	: 232°	224°
valve lift	: 11.20mm	10.40mm
cam lift	:	
lobe angle	: 110°	110°
timing @ 1.0mm	: 6° / 46°	41° / 3°
valve lift @ TDC	: 1.70mm	1.25mm

**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	: O.E.M.	: O.E.M.
interior spring	:	:

fitted load / length	: 20kg @ 0.0mm	: 22kg @ 0.0mm
max. load / lift	: 64kg @ 11.5mm	: 64kg @ 11.0mm

**REMARKS :**



**REMARKS :**