

# 4600534

sport

Opel OHC big block (1.6 > 2.0L)

I-4cyl 2.0L 8v SOHC (RPH/RPH)



### intake

### exhaust

#### camshaft data:

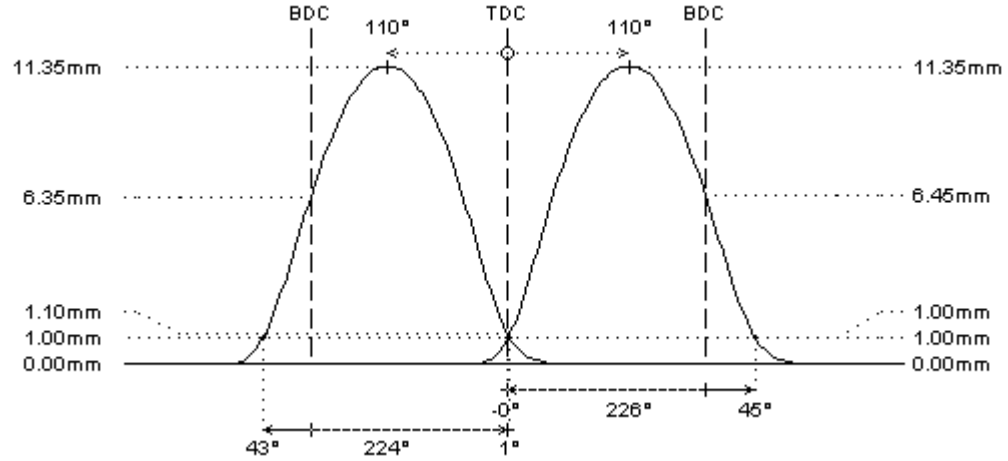
lash ramp	: hydro	hydro
duration @ 0.1mm	: 272°	271°
duration @ 1.0mm	: 225°	224°
valve lift	: 11.35mm	11.35mm
cam lift	: 6.90mm	6.90mm
lobe angle	: 110°	110°
timing @ 1.0mm	: -0° / 45°	43° / 1°
valve lift @ TDC	: 1.00mm	1.10mm

#### 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	: 0kg @ 0.0mm	: 0kg @ 0.0mm
max. load / lift	: 0kg @ 0.0mm	: 0kg @ 0.0mm

#### REMARKS :



#### REMARKS :

# 4600545

hot street - dirt track

Opel OHC big block (1.6 > 2.0L)

I-4cyl 2.0L 8v SOHC (RPH/RPH)



**intake**                      **exhaust**

**camshaft data:**

lash ramp	: hydro	hydro
duration @ 0.1mm	: 279°	279°
duration @ 1.0mm	: 239°	239°
valve lift	: 12.15mm	12.15mm
cam lift	: 7.15mm	7.15mm
lobe angle	: 105°	105°
timing @ 1.0mm	: 13° / 46°	46° / 13°
valve lift @ TDC	: 2.40mm	2.40mm

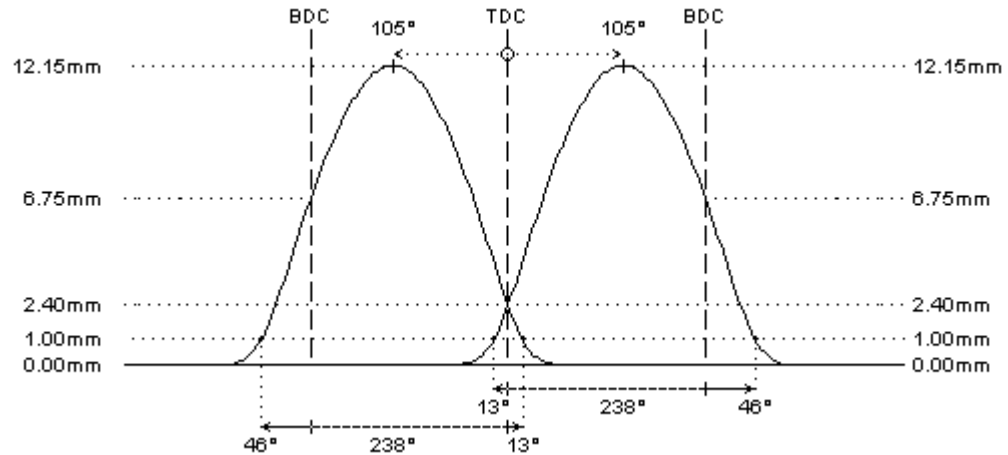
**parts setup:**

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	: <b>✗ not available</b>	: <b>✗ not available</b>
interior spring	:	:

fitted load / length	: 0kg @ 0.0mm	: 0kg @ 0.0mm
max. load / lift	: 0kg @ 0.0mm	: 0kg @ 0.0mm

**REMARKS :**

# Many different valve spring setups have been used in these engines. In most cases, the std spring can be replaced by **PAC-S99008** or **PAC-S99010** (check diameter). Please contact Cat Cams if a different setup must be used due to fitting, coil bind or valve float



**REMARKS :**

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

# 4600546

hot street - dirt track

Opel OHC big block (1.6 > 2.0L)

I-4cyl 2.0L 8v SOHC (RPH/RPH)



## intake exhaust

### camshaft data:

lash ramp	: hydro	hydro
duration @ 0.1mm	: 287°	287°
duration @ 1.0mm	: 247°	247°
valve lift	: 12.15mm	12.15mm
cam lift	: 7.15mm	7.15mm
lobe angle	: 105°	105°
timing @ 1.0mm	: 17° / 50°	50° / 17°
valve lift @ TDC	: 2.90mm	2.90mm

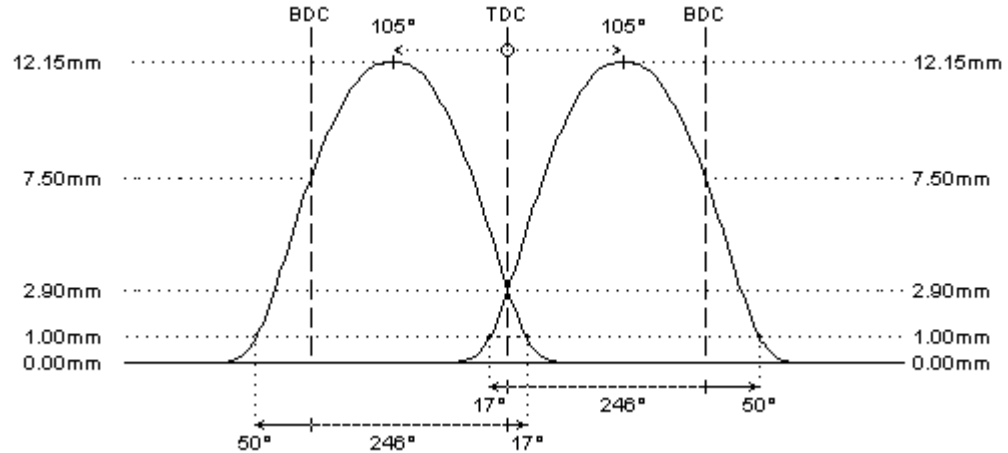
### parts setup:

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	: <b>✗ not available</b>	: <b>✗ not available</b>
interior spring	:	:

fitted load / length	: 0kg @ 0.0mm	: 0kg @ 0.0mm
max. load / lift	: 0kg @ 0.0mm	: 0kg @ 0.0mm

### REMARKS :

# Many different valve spring setups have been used in these engines. In most cases, the std spring can be replaced by **PAC-S99008** or **PAC-S99010** (check diameter). Please contact Cat Cams if a different setup must be used due to fitting, coil bind or valve float



### 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

# 4600547

tarmac rally - race

Opel OHC big block (1.6 > 2.0L)

I-4cyl 2.0L 8v SOHC (RPH/RPH)



**intake**                      **exhaust**

**camshaft data:**

lash ramp	: hydro	hydro
duration @ 0.1mm	: 300°	300°
duration @ 1.0mm	: 259°	259°
valve lift	: 12.15mm	12.15mm
cam lift	: 7.15mm	7.15mm
lobe angle	: 111°	111°
timing @ 1.0mm	: 17° / 62°	62° / 17°
valve lift @ TDC	: 2.90mm	2.90mm

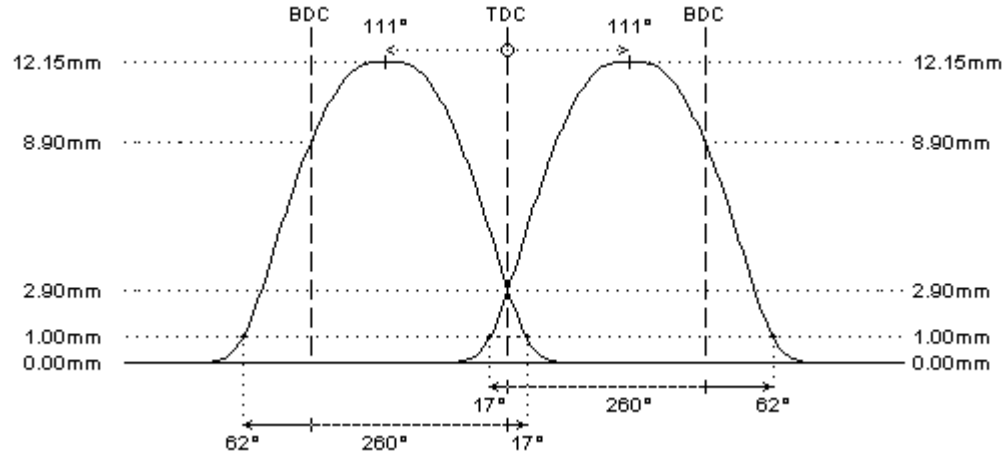
**parts setup:**

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	: <b>✗ not available</b>	: <b>✗ not available</b>
interior spring	:	:

fitted load / length	: 0kg @ 0.0mm	: 0kg @ 0.0mm
max. load / lift	: 0kg @ 0.0mm	: 0kg @ 0.0mm

**REMARKS :**

# Many different valve spring setups have been used in these engines. In most cases, the std spring can be replaced by **PAC-S99008** or **PAC-S99010** (check diameter). Please contact Cat Cams if a different setup must be used due to fitting, coil bind or valve float



**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

# 4600548

full race

Opel OHC big block (1.6 > 2.0L)

I-4cyl 2.0L 8v SOHC (RPH/RPH)



**intake**                      **exhaust**

**camshaft data:**

lash ramp	: hydro	hydro
duration @ 0.1mm	: 310°	310°
duration @ 1.0mm	: 271°	271°
valve lift	: 12.15mm	12.15mm
cam lift	: 7.15mm	7.15mm
lobe angle	: 105°	105°
timing @ 1.0mm	: 29° / 62°	62° / 29°
valve lift @ TDC	: 4.70mm	4.70mm

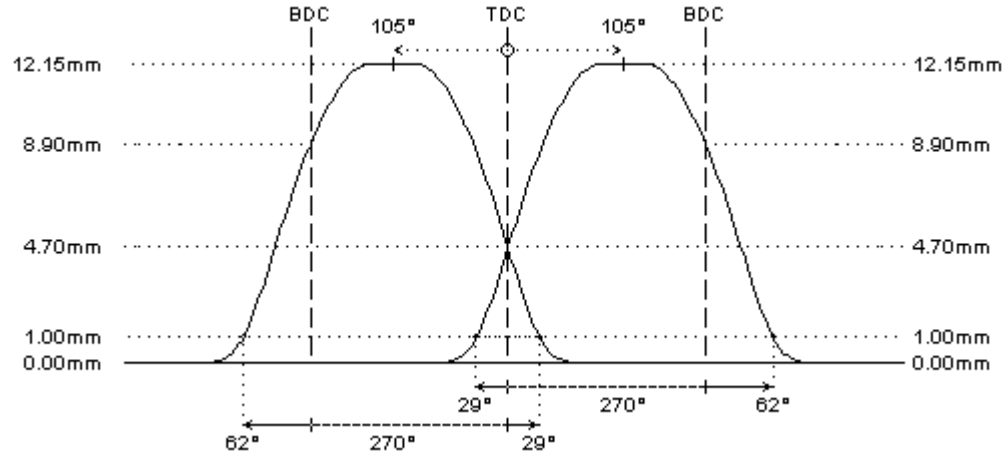
**parts setup:**

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	: <b>✗ not available</b>	: <b>✗ not available</b>
interior spring	:	:

fitted load / length	: 0kg @ 0.0mm	: 0kg @ 0.0mm
max. load / lift	: 0kg @ 0.0mm	: 0kg @ 0.0mm

**REMARKS :**

# Many different valve spring setups have been used in these engines. In most cases, the std spring can be replaced by **PAC-S99008** or **PAC-S99010** (check diameter). Please contact Cat Cams if a different setup must be used due to fitting, coil bind or valve float



**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

# 4600641

hot street - dirt track

Opel OHC big block (1.6 > 2.0L)

I-4cyl 2.0L 8v SOHC (RPH/RPH)



### intake

### exhaust

#### camshaft data:

lash ramp	: 0.25mm	0.25mm
duration @ 0.1mm	: 294°	294°
duration @ 1.0mm	: 256°	256°
valve lift	: 12.15mm	12.15mm
cam lift	: 7.15mm	7.15mm
lobe angle	: 105°	105°
timing @ 1.0mm	: 22° / 54°	54° / 22°
valve lift @ TDC	: 3.95mm	3.95mm

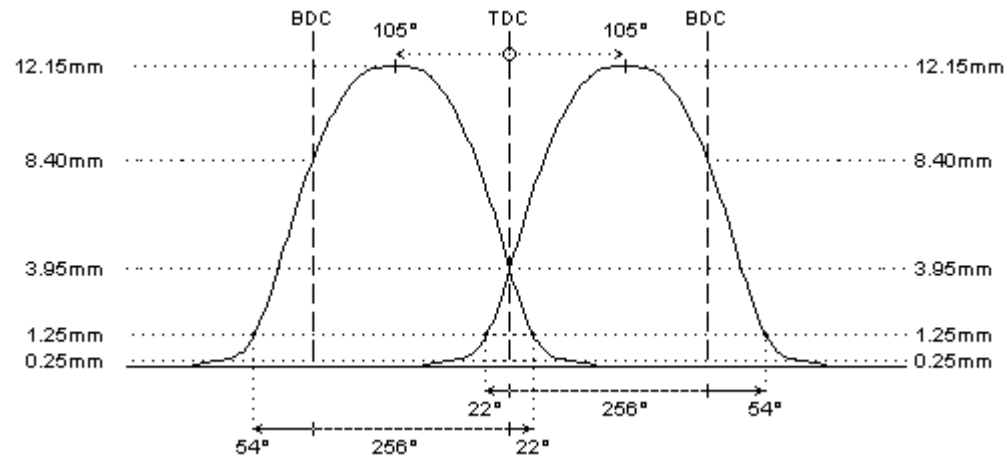
#### parts setup:

cam wheels :	:	:
follower	: O.E.M.	: O.E.M.
valve lash	: <b>CC081</b>	: <b>CC081</b>
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	: <b>not available</b>	: <b>not available</b>
interior spring	:	:

fitted load / length	: 0kg @ 0.0mm	: 0kg @ 0.0mm
max. load / lift	: 0kg @ 0.0mm	: 0kg @ 0.0mm

#### REMARKS :

# Many different valve spring setups have been used in these engines. In most cases, the std spring can be replaced by **PAC-S99008** or **PAC-S99010** (check diameter). Please contact Cat Cams if a different setup must be used due to fitting, coil bind or valve float



#### 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
- # FLAT NOSE cam design

# 4600642

tarmac rally - race

Opel OHC big block (1.6 > 2.0L)

I-4cyl 2.0L 8v SOHC (RPH/RPH)



### intake

### exhaust

#### camshaft data:

lash ramp	: 0.25mm	0.25mm
duration @ 0.1mm	: 301°	301°
duration @ 1.0mm	: 263°	263°
valve lift	: 12.10mm	12.10mm
cam lift	: 7.15mm	7.15mm
lobe angle	: 105°	105°
timing @ 1.0mm	: 26° / 57°	57° / 26°
valve lift @ TDC	: 4.65mm	4.65mm

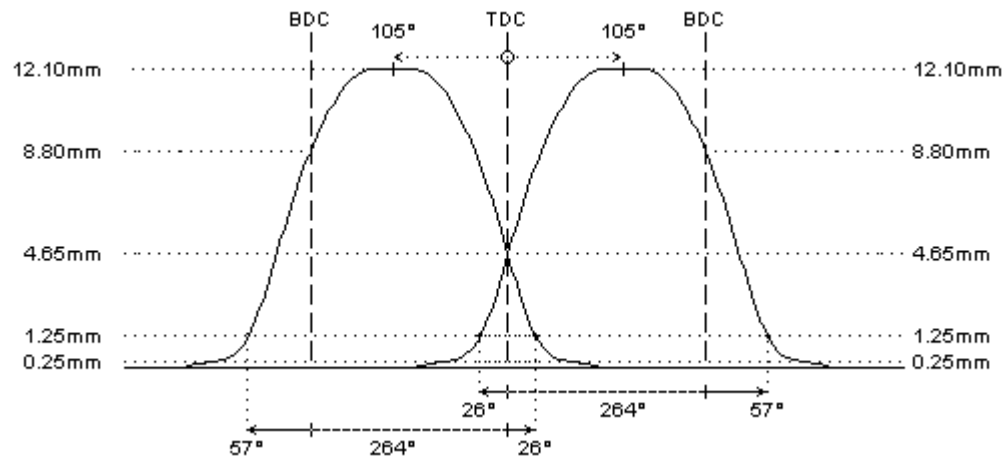
#### parts setup:

cam wheels :	:	:
follower	: O.E.M.	: O.E.M.
valve lash	: <b>CC081</b>	: <b>CC081</b>
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	: <b>✗ not available</b>	: <b>✗ not available</b>
interior spring	:	:

fitted load / length	: 0kg @ 0.0mm	: 0kg @ 0.0mm
max. load / lift	: 0kg @ 0.0mm	: 0kg @ 0.0mm

#### REMARKS :

# Many different valve spring setups have been used in these engines. In most cases, the std spring can be replaced by **PAC-S99008** or **PAC-S99010** (check diameter). Please contact Cat Cams if a different setup must be used due to fitting, coil bind or valve float



#### 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
- # FLAT NOSE cam design

# 4600643

tarmac rally - race

Opel OHC big block (1.6 > 2.0L)

I-4cyl 2.0L 8v SOHC (RPH/RPH)



**intake**                      **exhaust**

**camshaft data:**

lash ramp	: 0.25mm	0.25mm
duration @ 0.1mm	: 309°	309°
duration @ 1.0mm	: 271°	271°
valve lift	: 12.10mm	12.10mm
cam lift	: 7.15mm	7.15mm
lobe angle	: 105°	105°
timing @ 1.0mm	: 30° / 61°	61° / 30°
valve lift @ TDC	: 5.25mm	5.25mm

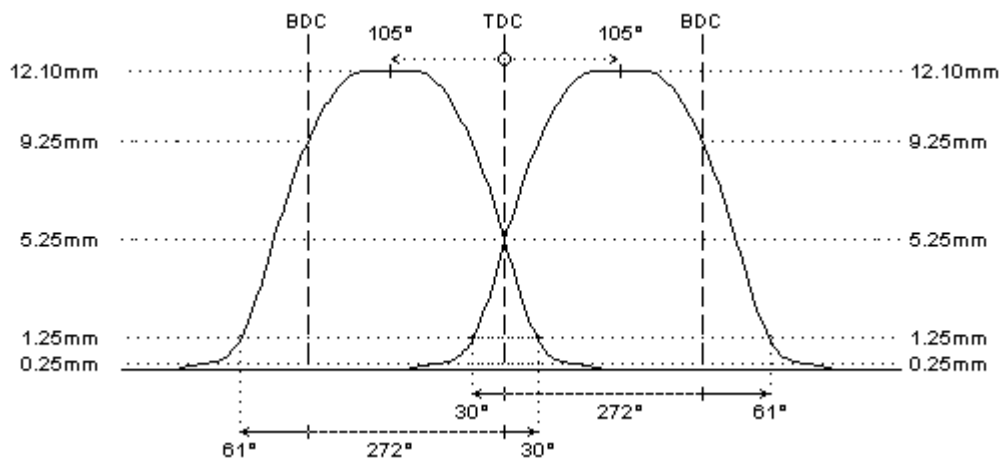
**parts setup:**

cam wheels :	:	:
follower	: O.E.M.	: O.E.M.
valve lash	: <b>CC081</b>	: <b>CC081</b>
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	: <b>✗ not available</b>	: <b>✗ not available</b>
interior spring	:	:

fitted load / length	: 0kg @ 0.0mm	: 0kg @ 0.0mm
max. load / lift	: 0kg @ 0.0mm	: 0kg @ 0.0mm

**REMARKS :**

# Many different valve spring setups have been used in these engines. In most cases, the std spring can be replaced by **PAC-S99008** or **PAC-S99010** (check diameter). Please contact Cat Cams if a different setup must be used due to fitting, coil bind or valve float



**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
- # FLAT NOSE cam design



# 4600644

full race

Opel OHC big block (1.6 > 2.0L)

I-4cyl 2.0L 8v SOHC (RPH/RPH)



## intake

## exhaust

### camshaft data:

lash ramp	: 0.25mm	0.25mm
duration @ 0.1mm	: 318°	318°
duration @ 1.0mm	: 279°	279°
valve lift	: 12.45mm	12.45mm
cam lift	: 7.10mm	7.10mm
lobe angle	: 105°	105°
timing @ 1.0mm	: 33° / 66°	66° / 33°
valve lift @ TDC	: 5.95mm	5.95mm

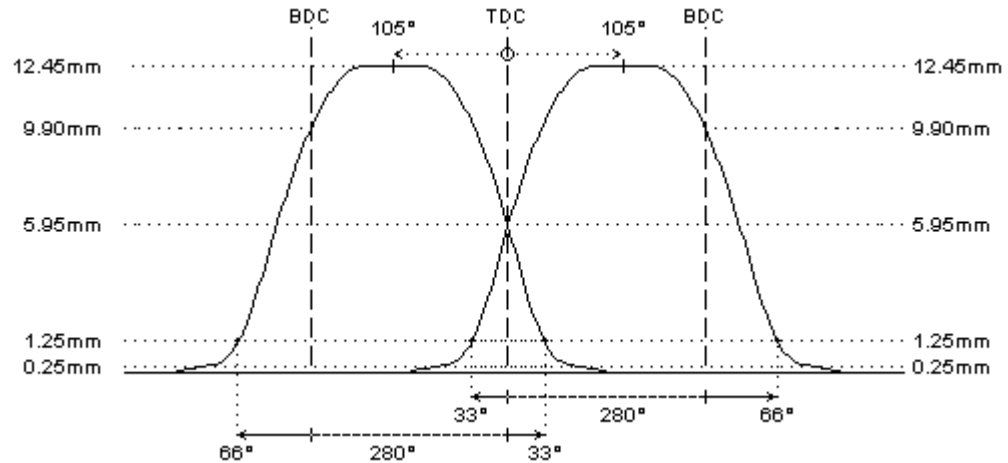
### parts setup:

cam wheels :	:	:
follower	: O.E.M.	: O.E.M.
valve lash	: <b>CC081</b>	: <b>CC081</b>
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	: <b>not available</b>	: <b>not available</b>
interior spring	:	:

fitted load / length	: 0kg @ 0.0mm	: 0kg @ 0.0mm
max. load / lift	: 0kg @ 0.0mm	: 0kg @ 0.0mm

### REMARKS :

# Many different valve spring setups have been used in these engines. In most cases, the std spring can be replaced by **PAC-S99008** or **PAC-S99010** (check diameter). Please contact Cat Cams if a different setup must be used due to fitting, coil bind or valve float



### 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
- # FLAT NOSE cam design