CAM LOBE LAYOUT

NOTE:
IF YOU DESIGN A CAM YOU MUST TAKE VALVE CLEARANCE INTO ACCOUNT. THIS WILL CHANGE THE LOBE PROFILE AND
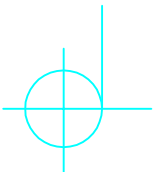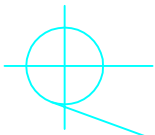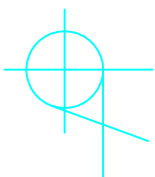
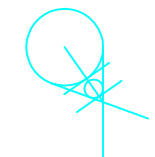### INTAKE LOBE

ø.400 / .1125 — BASIC LAYOUT

DRAW CAM LINE AT START OF OPENING
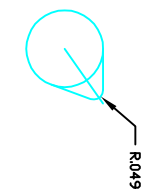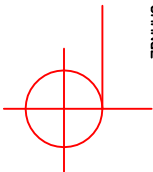
ROTATE 110° CLOCKWISE

DRAW CAM LINE AT CLOSED POSITION

DRAW LIFT OFFSET   .1125

DRAW NOSE RADIUS, TANGENT, TANGENT, TANGENT

TRIM   R.049

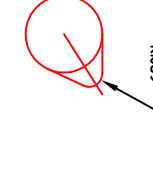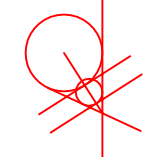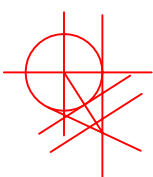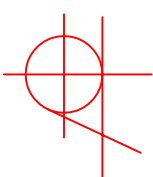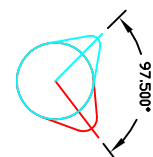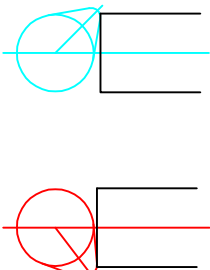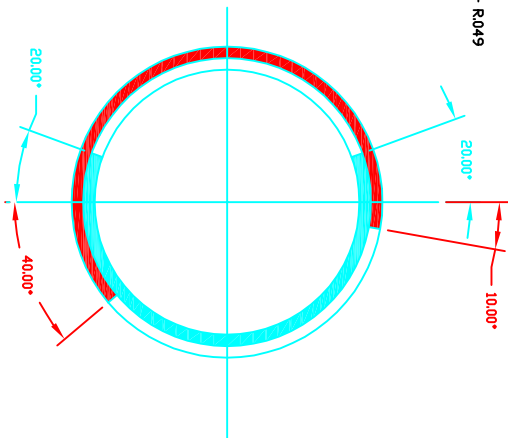### EXHAUST LOBE

ROTATE 115° CLOCKWISE

R.069

55.00°

POSITION LOBES RELATIVE TO CRANK AT TDC.
INTAKE WILL BE ROTATED 10° OPEN
EXHAUST WILL BE ROTATED 5° BEFORE CLOSING
REMEMBER: 1/2 OF CRANK DEGREES.

97.500°

NOW OVERLAP THE LOBE DRAWINGS AND DIMENSION THE LOBE CENTERLINE

YOU LOOK AT THE LOBE SEPARATION ANGLE AND SAY WHY IS IT SO NARROW? YOU'VE ALWAYS HEARD THAT THE ANGLE SHOULD BE AROUND 110 DEGREES.
THE REASON IT'S NARROW ON THIS LAYOUT IS BECAUSE THE TIMING EVENTS ARE QUITE MILD.
THE LONGER THE DURATION, THE FATTER THE LOBES, THE WIDER THE SEPARATION ANGLE.

INTAKE LOBE

.312 / .310 / .303 / .290 / .274 / .253 / .228 / .200

55.00°

DRAWN 4X SIZE

DRAW A LINE FROM THE CENTER OF THE NOSE RADIUS TANGENT TO THE CAM FLANK.
USUALLY I TRY TO DIVIDE IT INTO 8 DEGREE STEPS.
IN THIS CASE 7 STEPS WILL BE 7.857 DEGREES.

EXHAUST LOBE

.312 / .310 / .303 / .290 / .274 / .253 / .228 / .200

57.500°

STEP OFF CHART
TO CONVERT DECIMAL INCHES TO DEG. MIN. MULTIPLY BY 60

EXHAUST		INTAKE	
ROTATION	STEP	ROTATION	STEP
-0-	000	97.500	000
8.243	.002	105.357	.002
16.429	.009	113.214	.009
24.643	.022	121.071	.022
32.857	.038	128.928	.038
41.072	.059	136.785	.059
49.286	.084	144.642	.084
57.500	.112	152.499	.112
MAKE SMALL RADIAL CUTS AT -2-	.112		
302.500	.112	42.501	.112
310.714	.084	50.358	.084
319.929	.059	58.215	.059
327.143	.038	66.072	.038
335.357	.022	73.929	.022
343.571	.009	81.786	.009
351.786	.002	89.643	.002
360.000	000	97.500	000

CRANK TIMING

EXHAUST TOTAL OPEN: 230
INTAKE TOTAL OPEN: 220
CAM DEGREES ARE 1/2 CRANK DEGREES

20.00°   20.00°   40.00°   10.00°

DRAWN BY: GEORGE D. BRITNELL	
SCALE: FULL or NOTED	SHT. 1
DATE: OCT. 10, 2014	