

## ECOtEC CAMSHAFT INFO SHEET

This sheet provides basic information regarding production camshafts used in the ECOtec engines listed below. This information is accurate as of November, 2006. GM reserves the right to change specifications and part numbers without notice.

Note: ECOtec Engine codes refer to the following

L61 - 2.2L, used in Saturn ION & VUE; Chevy Cobalt & HHR, Pontiac G5

LE5 - 2.4L, used in Saturn ION & Sky, Chevy Cobalt SS & HHR, Pontiac G5 GT, G6, & Solstice

LSJ - 2.0L supercharged, used in Saturn ION Redline, Chevy Cobalt SS Supercharged

LNF- 2.0L turbocharged, used in Pontiac Solstice GXP, Saturn Sky Redline

### Production ECOtec Camshaft Specifications:

<b>INTAKE Part</b>	<b>Cam Peak Lift</b>	<b>Valve Peak Lift</b>	<b>Valve Timing</b>	<b>Duration @1mm lash</b>	<b>Valve area @1mm lash</b>
12587985 - LSJ	5.9557	10.03790354	100	196.50	1117.70
12590699 - '07 L61	5.9804	10.07953361	116	198.40	1112.90
12578511 - LE5	6.2551	10.54252068	135	210.30	1253.30
12589335 - LNF	6.111207	10.29999939	126	203.60	1171.30

<b>EXHAUST Part</b>	<b>Cam Peak Lift</b>	<b>Valve Peak Lift</b>	<b>Valve Timing</b>	<b>Duration @1mm lash</b>	<b>Valve area @1mm lash</b>
12584363 - LSJ	5.9543	10.04392819	-115	191.70	1076.40
12590700 - '07 L61	5.9752	10.07918306	-108	193.30	1078.00
12578512 - LE5	5.95143	10.03908697	-125	195.40	1092.70
12589340 - LNF	6.106106	10.30000003	-120	194.00	1106.00

Notes regarding camshaft interchangeability:

- The L61 (2.2L ECOtec) camshaft changed for the 2007 model year. This change was to go to a less aggressive cam profile with less noise, less jerk, less impact load, and better valve dynamics.
- The 2007 L61 intake cam cannot interchange with any other production ECOtec cam.
- The 2007 L61 exhaust cam is interchangeable with the '06 L61 and the LSJ exhaust cams.
- The 2006 L61 intake and LSJ intake and exhaust cams are the same casting. However, the LSJ cam sensor is driven with a hex bushing pressed into the rear of the exhaust cam. In order to operate properly, the production LSJ cam sensor requires a cam which has a hex bushing pressed into the exhaust camshaft with the exact orientation in angularity to the cam.
- The 2006 L61 cams and LSJ cams are the same profiles at different timings. The 2006MY L61 timings are 116 intake, -103 exhaust. The LSJ timings are 100 intake, -115 exhaust.
- The LNF and LE5 exhaust cams could interchange. The LNF and LE5 cams are not interchangeable in any other way or with any other ECOtec cams.

Valve springs are the same across all variants, and should be upgraded for high-rpm operation or increased lift.

The GM Performance Parts ECOtec cam set (88958648 set or 88958636/7 individually) are aggressive race cams, not stock-replacement cams. They require upgraded valve springs and retainers. These cams were designed for a race motor, using the '06 L61 as the starting point. The cams will not fit the 2.4L LE5 head and will not work with the stock ECM or lifters. They physically fit the 2.0L LSJ head, but the vacuum pump / cam sensor will not work in a regular production engine.