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<b>TECHNICAL BULLETIN</b>		
	<b>November 2006</b> <b>TB 2400</b>	

Camshaft Identification For  
1991-98 Nissan 2.4L KA24DE Engines

The AERA Technical Committee offers the following information regarding the Camshaft identification for 1991-98 2.4L Nissan KA24DE engines. This information will help during reassembly if the camshafts are not marked for location before disassembly.

The camshafts for these engines appear identical at first glance. They are in fact dimensionally the same. The one difference that makes them unique to location is the front dowel pin drilling. Originally, there was color coding on the cams, brown for exhaust and green for intake. Later model year camshafts have different lobe configurations between intake and exhaust locations.

To determine which cam is which, use the camshaft dowel pin to locate the intake and exhaust lobe positions. As viewed from the front of the head, the intake dowel pin will be at 12 o'clock with the front lobes on #1 cylinder at 12 O'clock position. Or, pointing straight up. On the other cam, the exhaust, when the dowel pin is at 12 O'clock the front lobes are at the 3 O'clock position. Or, pointing towards the exhaust ports.

Observe the published camshaft information in the illustration and chart below.  
See Diagram Tab

THE AERA TECHNICAL COMMITTEE

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<b>Reference:</b>	
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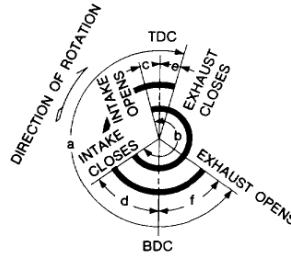
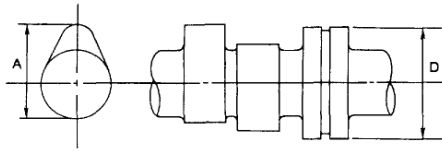
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## Bulletin Diagram: FIGURE 1. CAM DETAIL INFORMATION - VALVE TRAIN

### CAMSHAFT AND CAMSHAFT BEARING



SEM568A

EM120

Unit: mm (in)

		Standard	Limit
Cam height (A)	Intake	42.415 - 42.605 (1.6699 - 1.6774)	—
	Exhaust	42.415 - 42.605 (1.6699 - 1.6774)	—
Wear limit of cam height		—	0.2 (0.008)
Camshaft journal to bearing clearance		0.045 - 0.090 (0.0018 - 0.0035)	0.12 (0.0047)
Inner diameter of camshaft bearing	#1 to #6 journals	28.000 - 28.025 (1.1024 - 1.1033)	—
Outer diameter of camshaft journal (D)	#1 to #6 journals	27.935 - 27.955 (1.0998 - 1.1006)	—
Camshaft runout*		Less than 0.02 (0.0008)	0.04 (0.0016)
Camshaft end play		0.070 - 0.148 (0.0028 - 0.0058)	0.2 (0.008)
Valve timing (Degree on crankshaft)	a	232	—
	b	232	—
	c	-1	—
	d	53	—
	e	4	—
	f	48	—

\* Total indicator reading

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