



TT00033

Valve Lash Adjustment on 2005-2012 Nissan 4.0L VQ40DE Engines

S. B. International, Inc., offers the following information regarding valve lash adjustment for 2005-2012 Nissan VQ40DE engines. This engine uses unique mechanical lifters for its twelve intake and exhaust locations. There are twenty-five different exhaust lifters and twenty-seven (27) different intake lifters.

To help determine if a drivability issue may be the result of improper valve adjustment Nissan supplies both hot and cold lash adjustment values as shown in the chart below.

Valve Lash Adjustment Values VQ40DE

	<u>Engine Temperature Cold</u>	<u>Engine Temperature Hot</u>
Intake:	.010-.013ö (.260-.340 MM)	.012-.016ö (.304-.419 MM)
Exhaust:	.011-.015ö (.290-.370 MM)	.012-.017ö (.308-.432 MM)

The clearance should be measured by placing a flat feeler gauge with the camshafts torqued in the proper positions and the checking location cam lobe pointing up and away from the lifter. Measure and record all 24 locations and determine which locations need adjustment by referring to the chart above. The camshafts will have to be marked for specific location and removed to allow access to each lifter. The lifters are of different thicknesses and should be measured with a 0-1ö (0-25.4 M) micrometer as shown in the lifter chart below.

The unique part number is etched on each lifter to help determine what thickness a NEW lifter should be. Be sure to measure all used lifters as wear may be present as shown in the diagram below. New lifters are available with the part number plus the thickness measurement. The exhaust lifters are slightly taller than the intakes and have an N preceding their number. The exhaust lifters use Part # 132317S(806) while the intakes are available with part number 132312Y(806) and have a U after their thickness number.



Figure 1: .3173” (8.06MM) Intake Lifter

Unit: mm (in)

Identification (stamped) mark		Thickness
Intake	Exhaust	
788U	N788	7.88 (0.3102)
790U	N790	7.90 (0.3110)
792U	N792	7.92 (0.3118)
794U	N794	7.94 (0.3126)
796U	N796	7.96 (0.3134)
798U	N798	7.98 (0.3142)
800U	N800	8.00 (0.3150)
802U	N802	8.02 (0.3157)
804U	N804	8.04 (0.3165)
806U	N806	8.06 (0.3173)
808U	N808	8.08 (0.3181)
810U	N810	8.10 (0.3189)
812U	N812	8.12 (0.3197)
814U	N814	8.14 (0.3205)
816U	N816	8.16 (0.3213)
818U	N818	8.18 (0.3220)
820U	N820	8.20 (0.3228)
822U	N822	8.22 (0.3236)
824U	N824	8.24 (0.3244)
826U	N826	8.26 (0.3252)
828U	N828	8.28 (0.3260)
830U	N830	8.30 (0.3268)
832U	N832	8.32 (0.3276)
834U	N834	8.34 (0.3283)
836U	N836	8.36 (0.3291)
838U	—	8.38 (0.3299)
840U	—	8.40 (0.3307)

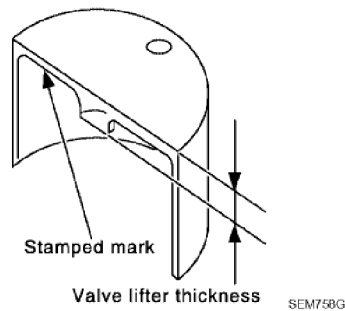


Figure 2: Available Lifter Chart

The camshafts must be reinstalled in their previous noted locations and the cam caps torqued in the sequence shown below in the steps indicated here. Recheck your lash measurements to verify all are within specifications.

Step 1: (Bolts 7 - 10) **1.96 Nm (0.2 kg-m, 17 inch lbs.)**

Step 2: (Bolts 1 - 6) **1.96 Nm (0.2 kg-m, 17 inch lbs.)**

Step 3: All Bolts **5.88 Nm (0.6 kg-m, 52 inch lbs.)**

Step 4: All Bolts **10.4 Nm (1.1 kg-m, 92 inch lbs.)**

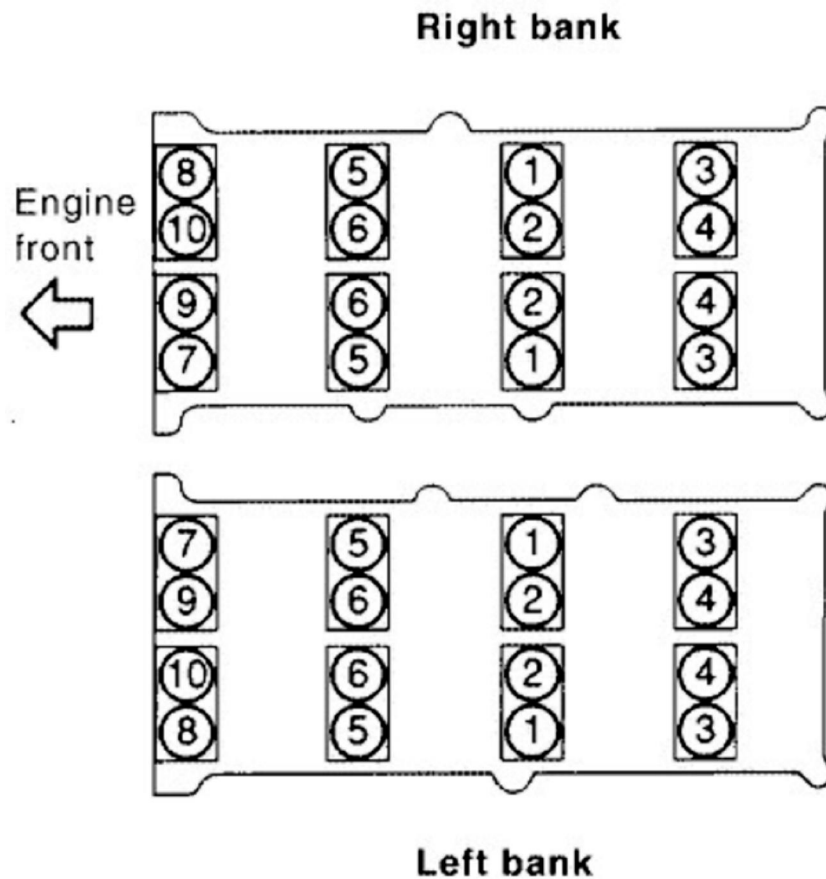


Figure 3: Camshaft Cap Torque Sequence

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