

DOHC ZC VALVE ADJUSTMENT

By Jerry (jlicrx) posted on www.thezcr.com

1. Remove valve cover and top half of timing belt cover.
2. Place socket with ratchet on crank pulley bolt.
3. Rotate engine counterclockwise with ratchet and watch camshafts - rotate until the "UP" arrows are pointing generally up and the marks on the side of the cam gears (between gears) are lined up directly across from each other – check to make sure TDC mark on crankshaft pulley is aligned with mark on lower timing gear cover (TDC mark is the one to the right, looking at pulley, of the 3 ignition timing marks) – if TDC mark is not lined up when the camshaft marks are directly across from each other, the timing belt is not installed correctly – if everything is lined up you will be at TDC on Cylinder #1 (#1 is closest to timing belt). If everything isn't lined up, you need to correct the timing belt before proceeding.
4. Do all 4 valves for cylinder #1.
5. Using a 12mm box end wrench, loosen the adjuster locknut while holding the adjuster screw that goes thru the nut with a screwdriver.

NOTE: DOHC adjustment is not like SOHC adjustment – SOHC, you check lash between bottom of adjusting screw and top of valve – DOHC, you check lash between rocker arm and camshaft lobe.

6. Insert feeler gauge (.13mm-.005in for intake or .15mm-.006in for exhaust) (exhaust closest to front of car – intake closest to firewall) between the top of the rocker arm (the piece that the adjuster goes thru) and the underside of the camshaft lobe - the feeler gauge should slide in and out with a slight amount of drag - holding the locknut with the wrench, turn the screw part down with screwdriver until you can't move the feeler gauge and then back the screw out slightly until you can just slide the gauge in & out with a little bit of drag on it - not too tight where you have to really pull on it, yet not so loose that it just slides right out.
7. When you get it just right (with feeler still in), hold the screw part in position with the screwdriver and tighten the locknut - try sliding the feeler gauge in and out again to make sure it is right - occasionally when you tighten the locknut, it will change a little - if so, do it again and tighten the screw part down a little more so that the feeler gauge feels a little tight and then tighten the locknut - keep checking till it is right.

8. Once you have finished with #1, rotate the crankshaft counterclockwise 180 degrees - I usually take a piece of chalk and place a mark on the front of the crank pulley at the 12 o'clock position when it is up at TDC on #1, so that when you turn it 180 degrees the chalk mark is down at 6 o'clock - "UP" arrows should now be pointing toward front of car - you will now be at TDC on Cylinder #3 (3rd one back from timing belt). It doesn't have to be exactly 180 degrees from where it was at #1 - within a few degrees is o.k.
9. Adjust all 4 valves for #3 just like you did for Cylinder #1.
10. Once you have finished with #3, rotate crankshaft counterclockwise 180 degrees - "UP" arrows should now be pointing down and chalk mark at 12 o'clock - you will now be at TDC on Cylinder #4 (closest to distributor).
11. Adjust all 4 valves for #4, just like before.
12. Once you have finished with #4, rotate crankshaft counterclockwise 180 degrees - "UP" arrows should now be pointing toward the firewall and chalk mark at 6 o'clock - you will now be at TDC on Cylinder #2 (2nd one back from timing belt).
13. Adjust all 4 valves for #2, just like before.
14. Takes a little longer, but I always go through them again, checking with the feeler gauge, without loosening anything (unless it needs it), just to be sure they are all o.k. and that all locknuts are tight.
15. Replace timing belt cover and valve cover.
16. Don't forget to remove socket and ratchet from crank pulley bolt!!!