

Original write-up by W. Boyter

The following information is gathered from pages 3.10-3.12 of the Honda Aero Shop Manual.

First of all, pull all your spark plugs, make sure your transmission is in neutral. Take off your tank. Make sure the petcock is turned to the OFF position.

Take off the decorative plastic covers off your cylinders. They're held on by those bolts with the Allen-heads. (size 5mm). I strongly suggest that you place the two from the rear up on a table side by side, and drop the allen bolts back in the holes they came from so that you're not scratching your ass wondering where the hell you put 'em later.

The valve covers are held on by the two large flared nuts? (Pic 1) Underneath the flared side is a rubber washer, don't lose it, you'll need it. Also be warned that the oil will pour right on out from under that cover when you take it off. Maybe a little, maybe a lot, but it's going to happen, so put some newspapers down or whatever. If your due to for an oil change, this is an opportune time to perform the valve adjustment, as all the oil can be drained and avoid spilling any.

The valve covers were a little tough for me to get out at first. Both valve covers have a hose attached to the top of them that connects your pair valve. If you don't re-connect it later things just won't work right. Remove the pair valve housing from the rear cover to get it out from under the frame. (two nuts, 8mm) I pulled the rear cover through to the RIGHT of the bike. For the front valve cover, turn it at an angle, push it against the hoses behind the radiator, and it should pull through to the LEFT side fairly easily. Don't get discouraged, because this part can make you start to doubt your own intelligence, like a Chinese puzzle.

Another warning: there's a rubber gasket underneath that valve cover that keep oil from dripping all over the bike, so use some care when your taking off the cover. It is bonded to the cover with some hi-temp silicone adhesive. It may get a little loosened, or, as in my case, just get pulled off, in which case you might hit it with a little silicone yourself and set it aside to dry while you're working.



(Pic 1)

This is what you should see. (Pic 2) The valve stem runs along inside those springs. It gets pushed down by the rocker arm from above. The gap between the two is what you're about to adjust.

Adjust the intake valve gap to .15 mm and the exhaust to .20 mm. The valve on the pipe side is the exhaust, it's also the solo one; the pair on the other side are the intake valves, they're also on the carburetor side.



(Pic 2)

Alright folks, this is where the nitty gets gritty. You will need:

- a good offset 10mm wrench,
- a pair of long needle-nosed pliers (don't worry about that "special tool" shown in the manual picture - it's really not necessary),
- a feeler gauge (costs about \$3 bucks down at the NAPA store at the corner and looks like a stack of thin blades of metal that folds like a jack-knife. Each blade is stamped with a metric and corresponding standard thickness.)

Remove the side cover from the crankcase (left side of engine). (5mm Allen head.)  
Remove 2 inspection plugs. (6mm and 10 mm Allen head.) Be aware of the o-rings behind the inspection plugs. Use a 17mm socket wrench through the large inspection hole to turn the engine COUNTER-clockwise, while watching through the small inspection hole. (Pic 3)



Pic 3

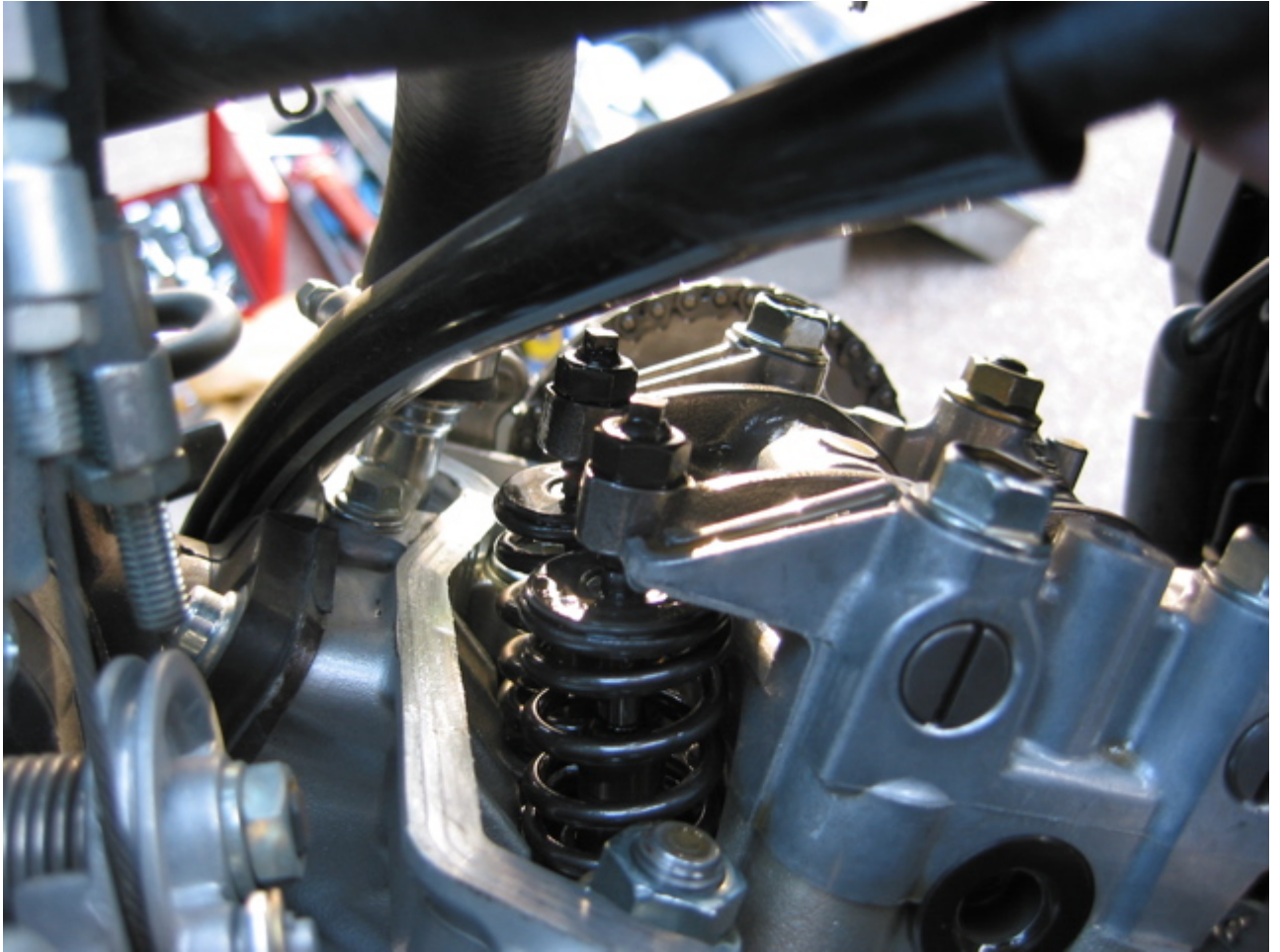
See inside of there? (Pic 4) See that little hash mark on the wheel? While your turning the crankshaft COUNTER-clockwise, those marks will roll by. I do believe that you'll see 'F' then 'FT'; 'RT' is the last one. Now this here is real tough. Put the mark on 'FT' if you're doing the FRONT valves, 'RT' if the rear. You need to line up that mark to get to Top Dead Center (TDC). But here comes the trick, and where I screwed up the first time.





Pic 4

After you see the RT/FT mark, turn that crankshaft COUNTER-clockwise one more time. Set it to the mark, then reach in here and feel of the top of the rocker arms. Is there a little bit of slack? (Pic 5) Then you're in the right spot. Are they stiff and putting pressure down on the valves? Go back and turn that crankshaft one more time, then check again. I didn't do this the first time and set them incorrectly, causing me to have to go back and do it again.



Pic 5

Okay, now that you've made certain that there's no tension from the rocker arms, it's time for the feeler gauge. Below is the exhaust valve on the front cylinder. (Pic 6) Using the offset 10mm wrench, on the nut I marked with a **RED** arrow (called a *locknut*), loosen it liberally, but don't take it off. This can't be done with a socket wrench, as you have to simultaneously adjust the small square screw that's marked with the **BLUE** arrow in just a moment. Once you get the square screw adjusted, hold it with the needle nose pliers and tighten the locknut.



Pic 6

Now slip that feeler gauge in the gap. (Pic 7) Remember, it's .20mm for the exhaust, .15mm for the intake. Don't screw up and set it to .20 INCHES. Do it otherwise and you'll be crying the blues. You should feel a little drag on the feeler gauge: not a drag-ass, holycrap-is-this-thing-coming-out-or-not kind of tension, while at the same time not a wide 'ol gap without any resistance at all. I left the feeler in there while I tightened up the lock nut to make sure I didn't tighten up *past* the proper range. (Just a suggestion.) After you tighten up the lock nut, the feeler should come out with just a little bit of resistance.



Pic 7

Same concept applies to all the other valves, just be sure that you use the proper feeler gauge blade for intake/exhaust. Put the valve covers back on, the timing and crankshaft hole caps back (but I'd make sure to run a little bit of bearing grease on the threads of those two), and the faux-chrome stuff back on. Tank comes last of all.

Here's another parting shot: run your bike almost out of gas before you do this. That way you're only dealing with about half a gallon of gas in that tank, instead of approximately 22 lbs of weight with 3.5 gallons gas in addition to the weight of the tank.