

Breather Valve Fixes Oil Leaks! By Alan Goldwater. © 2001 All Rights Reserved

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Many of us have discovered that our Nortons tend to leak more oil as they age. At 30k miles, my 850 started weeping oil out the head joint. Several head gaskets and oily weekends later I realised the leak wasn't from the mating surface, but from the casting around the push rod tunnel. By 40k miles, several other places were leaking, including the case joint and the tach drive (despite the seal mod!). Finally I concluded these symptoms could all be caused by pressure inside the motor. I installed a hose fitting on the intake valve cover and connected a gauge that measured from 10 psi vacuum to 10 psi pressure. Some of you may have seen me riding around with this kludge stuffed in the map pocket of my tank bag this summer. My testing confirmed the theory, showing positive pressure of up to 2 psi inside the motor at 4500 rpm.

I tried several types of PCV valves, but none reduced the internal pressure, and some actually increased it. Finally Doug McCadam, of the Colorado Norton Works reminded me of a part mentioned in 1998 on the NOC-UK email list, the Motormite/HELP #80190 brake booster valve. With this valve installed about midway up the large breather hose, pressure at the head dropped to -2 psi (vacuum) at idle. This gradually increased with engine speed, to just slightly negative pressure at 4500 rpm. An extended test ride of 500 miles showed that all of the oil leaks were gone, and oil consumption decreased from 300 mi/qt to around 700 mi/qt. At under \$5, this is the most cost-effective Norton accessory I've seen, and every Norton with the large breather should have one. Several other Norton Club members have tested this part, and all share my enthusiastic opinion of it. You can find it on the rack at Kragen and many other auto parts stores.

The question remains where is the pressure coming from. There was an extensive discussion of this phenomenon on the NOC-UK email list starting in 1997. While several theories had been offered, no one thought to do the simple test with a gauge, so I'm not convinced any of them were correct. There was a favorable review of the HELP part by INOA member Ben English.

Most mechanics I've asked think the increase in pressure is due to combined blow-by from worn rings and valve guides. This seems reasonable to me, but the pressure I measured seemed to increase with engine rpm but not with throttle opening, so there seem to be some other mitigating factor(s). What do you think? Send me your theories on this by email ([magicsound@aol.com](mailto:magicsound@aol.com)).