

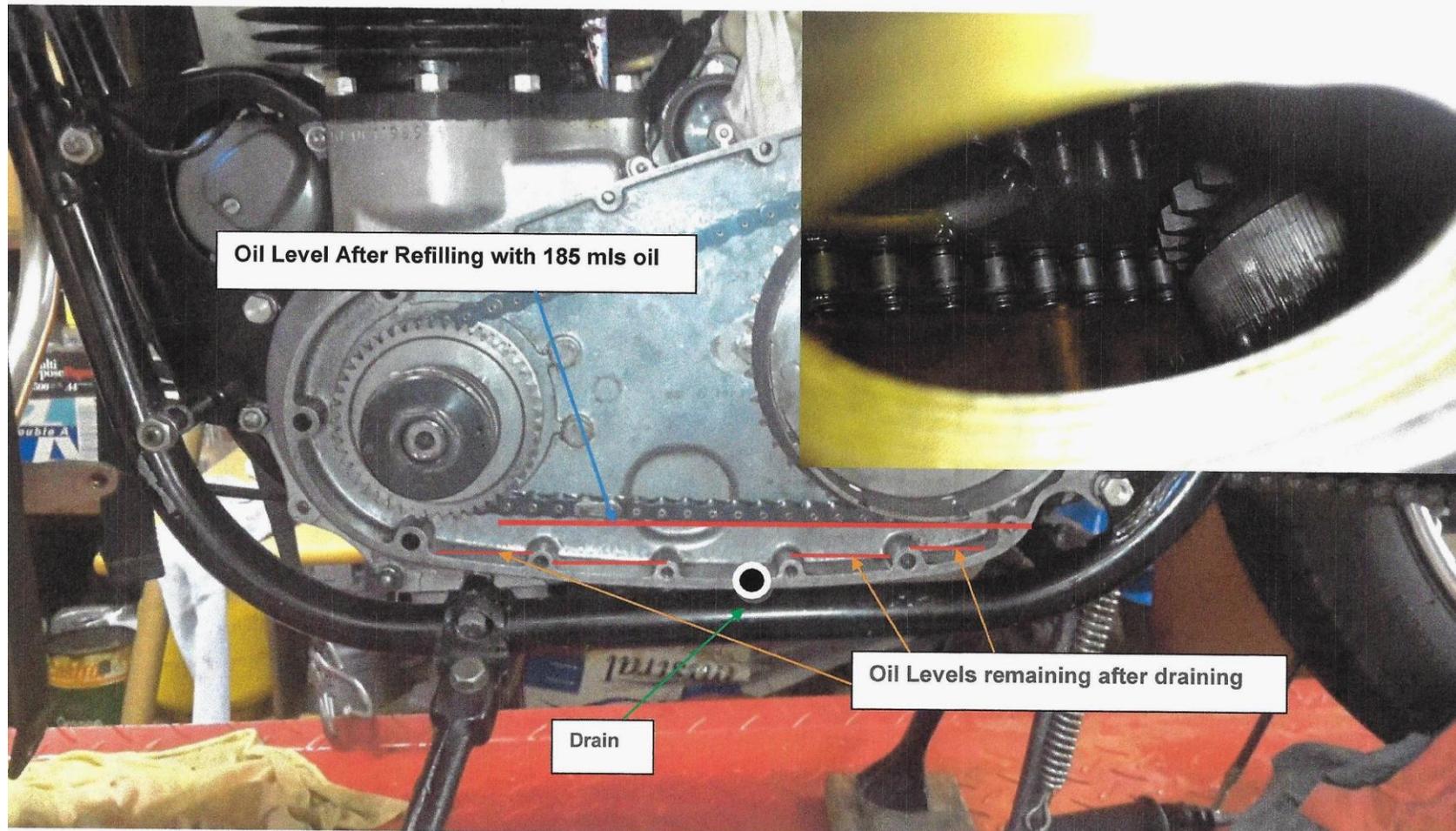
BSA A10 S/A Chaincase Oil Level Pedanticism to a Whole New Level – Colsbeeza.

8th August 2021

It is generally accepted that the oil volume for the S/A primary chaincase is between 190mls (SRM) and 225 mls (BSA), presumably after a reassemble dry. I thought I would try to narrow this down a bit.

After draining the chaincase, there is a considerable quantity of oil trapped between the screw bosses.

Recently, my primary chain was a bit tight and a bit warmer than I like when I returned from a ride, so I adjusted the chain but thought the oil level may have been a bit low. I drained the chaincase, and then added oil to the retained oil volume until the level was visually just touching the bottom of the chain (See Inset) – 185mls. It is a bit hard to see from the photo,



but it comes slightly above the bottom of the oval at the back of the inner case. (*As an aside - Why was that oval made in the first place – does it have a purpose?*) But by then I had no idea of the total oil volume in the chaincase.

Today I had to remove the chaincase, so took the opportunity to measure the retained oil volume and make a few conclusions.

Photos of my overflow tube and the drain boss thickness for comparison to your bike. Are these standard for BSA S/A ??

After removing the drain plug to check any overfill. I got 23 mls. So it was overfilled?? The clutch is OK so not being affected. There have been no signs of leakage from the gasket beneath the primary, nor the added felt seal behind the clutch centre (in addition to the sliding plate felt seal).



I then removed the oil drain nut which has the built-in level tube, and got a further 160 mls.

After the drips had stopped, I removed the outer primary cover and collected the retained oil, and wiped a bit more from the inside & outer covers - this gained a total of 42 mls retained oil, far more than anticipated - plus sediment.

This all added up to 225 mls plus the extra weight in my oily rags and very oily fingers– perhaps another 5mls or so.

Conclusions are:

1. I must have had a total of about $180 + 42 + 5 = 227$ mls of oil in chaincase last time I topped it up. So must have fluked the amount I added previously.
2. My drain tube and chaincase boss are probably correct from the factory, but can't explain the 23mls overfill.
3. The chaincase holds $160 + 42 = 202$ mls from dry to overflow level with my standard?? overflow tube.
4. That 190mls added to a dry primary may well allow the chain to bounce through it occasionally and provide sufficient lubrication, but it is the minimum volume to add.
5. I support BSA's advised volume of 225 mls, and will in future be adding that. It means overfilling the standpipe by 20-25mls. Perhaps for speed, the volume should be lower to reduce loss of power.
6. And adding 160mls after a rare drain and refill. Only reason I can think why this would be done is to be sure of the total chaincase volume.

Future experiences with the clutch may change my thoughts.