

ARV Super 2 Brake Rebuild

I found very little information about rebuilding the ARV brakes and hope this may help others faced with these tasks. However this not a authoritative guide and the implications of incorrect assembly should be considered. (e.g. taxiing into persons, vehicles, animals, property, failing to stop on the runway, start up runaway etc.) Always consult your LAA inspector. The brake master cylinder fitted to ARV-1 serial no. 010 is a Brembo 10.2928.00. It was also fitted to the rear brake system of Ducati 900SS and Triumph TSX motorcycles.



The rebuild kit which I obtained from www.gutsibits.co.uk, was Brembo part no. 98.5029.70, a PS12 rebuild kit Gutsibits part no. BRA140701. The instructions were not much help (probably because the cylinder is so old, mine is dated May 1981). There were no pictures which looked like the cylinder I have, but the parts in the rebuild kit were identical to the parts I removed from the cylinder.



Having first packed the area under the cylinder with paper towels to catch any spilt brake fluid, the two unions were disconnected from the T piece using a 7/16" spanner and the ends covered to prevent the ingress of dirt. The two nuts, bolts and four spacers were removed to release the cylinder. The cylinder could then be turned on its side so that a split pin could be removed from the operating lever and the cylinder was then removed from behind the P1 seat.

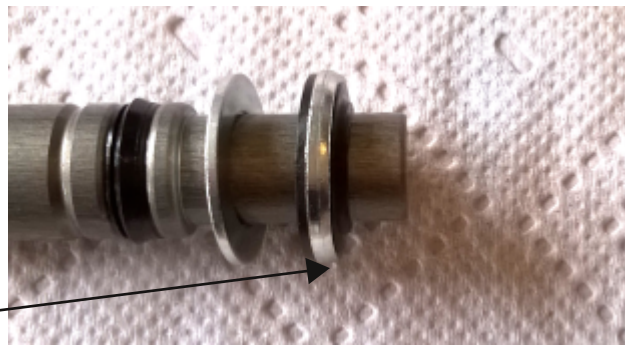
The taper threaded T piece was removed from one end of the cylinder and a circlip and pin removed from the other end to allow the lever to be removed.

Gripping the mounting lugs in the vice a 3 mm drift was used to gently drive the plunger, seals and retaining collar from the cylinder as shown.



The internal parts came out of my cylinder in the order shown. The bore of the cylinder appeared in perfect condition, so the new parts were very lightly greased, with the supplied grease and re-inserted in the same order.

The curved or chamfered edge of the retaining collar positioned away from the rubber seal.



A tool is required to push the retaining collar into its groove in the cylinder body. A piece of aluminium tube was turned to 18.4mm OD and 40 mm long and a plug was also turned to fit the end of the tube. The whole assemble was then pushed back together with a clamp until the collar dropped into its groove.



The T piece was then refitted with Loctite 542 and the lever lubricated and locked in place with the pin and circlips.

After reconnecting the brake pipes, bolting the cylinder back in place and reconnecting the operating cable. the system was bled from the top using a Gunson EEZIBLEED at 15psi. Although I have had success bleeding the system by injecting fluid in from the caliper end this one man system seems to have done the job.



Calipers

The calipers are P5 which were also fitted to a wide range Moto Guzzi motorcycle rear brakes. I believe that they are no longer available, but the calipers are the same as F05 apart from the position of the mounting lugs. So F05 spares are often listed as F05 (P5) and are suitable.

Gutsibits also sell the stainless steel pins & anti-rattle springs (BRA39910), pads (BRA19724), the clip-on plastic covers and seals for the calipers (BRA19722).

The pads certainly need breaking-in. They appeared to have poor breaking action. Taxiing about and braking didn't seem to improve them much, however after a high speed run down the runway with the brakes partially on they improved dramatically. I am told it is the heat that is needed to break them in.