SERVICE NOTE No. 009-2007 **13-07-2007**

Topic: Rear brake bleeding campaign

Subject: procedure for bleeding air from the rear brake system on RSV Mille and Tuono Mille RR version

Dear Dealer,

the above Aprilia models have indicated, the rear brake lever stroke gets longer due to some air residues within the circuit this results in frequent bleeding being required.

We carried out some analysis and tests and concluded that a standard bleeding procedure could prove inefficient.

Following are some preliminary inspections and a bleeding procedure to be performed in two different steps: on the calliper and on the master cylinder.

For this operation, you will be granted the labour time and intervention shall be entered in the GGP system.

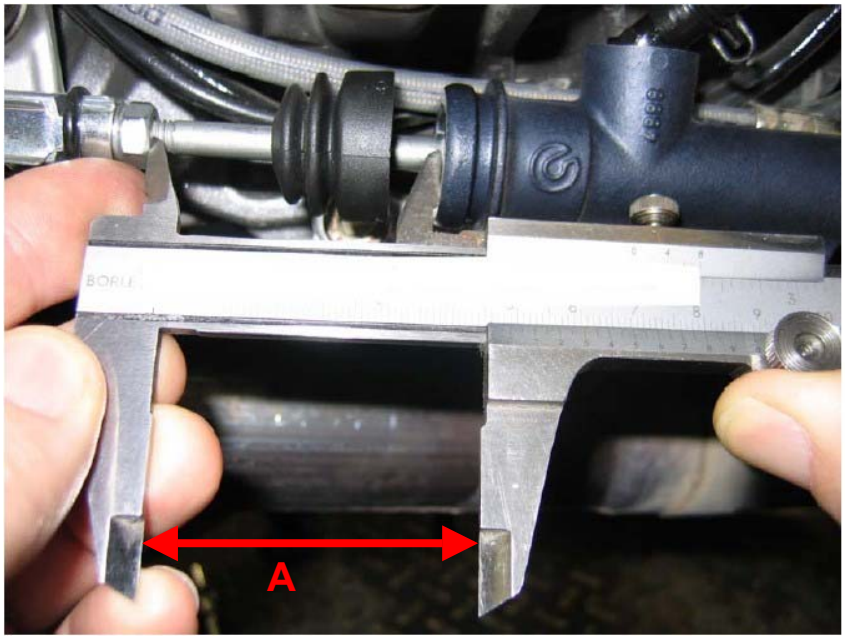
Preliminary checks:

1. The brake master cylinder installed on the vehicle should be equipped with fitting part no. **AP8133872** and brake fluid reservoir part no. **AP8133873** that are standard equipment since the end of 2004. To ensure a correct air bleeding, both the fitting and the hose connecting master cylinder and reservoir must be 4.5 mm of diameter. (For further details, please refer to **technical note no. 16 issued in 2005,** also available in the web site www.serviceaprilia.com)
2. Check brake master cylinder peg clearance. It should be between **1.0 and 1.5 mm**. For measuring and restoring correct master cylinder peg clearance, if necessary, please refer to the following procedures.

Adjusting peg clearance

WARNING: CARRY OUT THIS PROCEDURE WITH THE BRAKING SYSTEM AT AMBIENT TEMPERATURE (AFTER APPROX. 2 HOURS FROM VEHICLE STOP)
Photo 1

A. Rear brake lever free play (idle travel)



1. release brake lever return spring;
2. take a first measurement (see picture 1) with the brake lever held in the uppermost position
3. Take a second measurement with the lever at rest position.
4. The difference between these two values read shall be **1.0-1.5 mm.** and this is the reference value
5. if the difference is larger or smaller, adjust the threaded pin until peg clearance is **1.0-1.5 mm**

6. Take some more readings to ensure that the new values correspond to the reference value given.

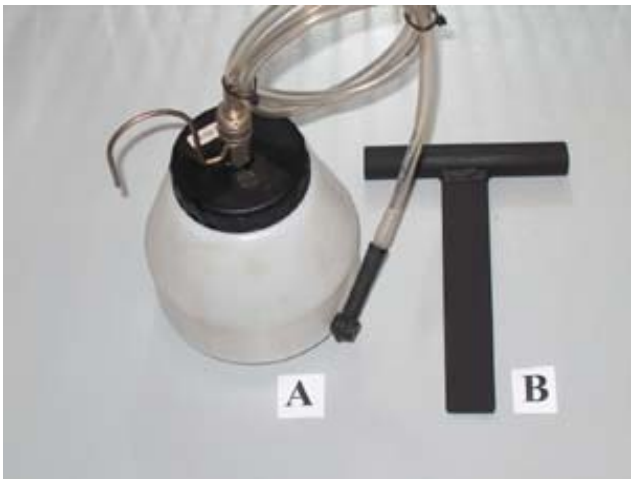
After these preliminary inspections, proceed with the following bleeding procedure.

APRILIA 1000 RSV/TUONO 1000
REAR BRAKE BLEEDING PROCEDURE

For this operation, use DOT 4 oil from sealed containers; **do not use DOT 5.0** or **DOT 5.1** oils since the first damages system seals while the second, though compatible, is more hygroscopic and can thus cause vapour lock if not properly preserved.

The following tools are necessary (picture 1):

Picture 1



A) collector for oil flowing out of the calliper during the bleeding procedure, with clear tube and 90° spout

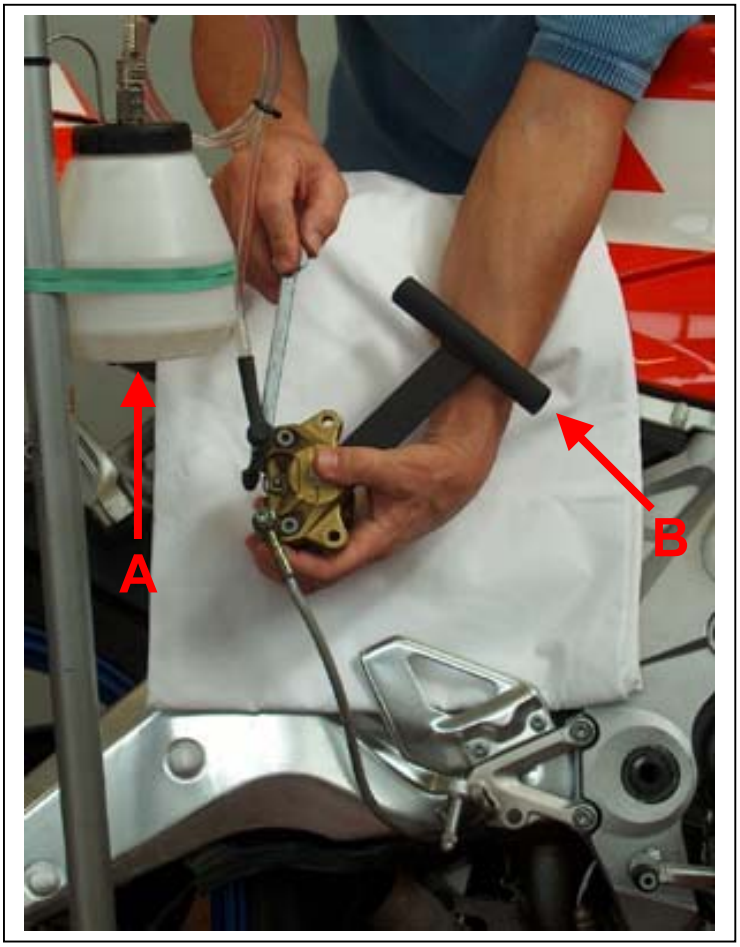
B) spacing/retractor tool (shall be built); blade size: width 30x3 mm., used for:

1. prevent brake calliper pistons from popping out of their seat during bleeding operation on calliper side;
2. move apart the calliper pads while bleeding on master cylinder side.

Preparing the vehicle:

1. Set the bike on its side stand, on a level floor; do not use a lift and/or centre stands;
2. Some brake fluid might spill out during the procedure, protect any vehicle parts in a suitable way (see picture 2) to avoid damages
3. remove the return spring on rear brake lever, in order to better feel lever movement during the following steps;
4. remove brake line guide and speed sensor cable, located under swing arm right section;
5. remove brake calliper and set it so that bleeder nipple is the highest part of the whole braking system and keep it tilted to help air escape;
6. **WARNING do not remove** the braking pads from their seat in the calliper;
7. connect the collector (A) to the calliper using the clear tube and set it toward calliper top end;
8. Fit spacer/retractor tool (B) in-between the pads. **WARNING** if you do not use a tool with minimum thickness of 3 mm, pistons could come off the calliper during the process;
9. open the vehicle fluid reservoir, check fluid level and continuously ensure that it does not fall the below minimum level;

Picture 2



Bleeding procedure on Calliper side, Standard way:

1. Press the brake lever until the spacer/retractor tool (B) fitted in-between the pads locks in place;
2. Maintain pressure on the brake lever;
3. open the bleeder nipple and check if air is coming out together with oil; **WARNING during this operation, carefully check the fluid level in the reservoir since it will drop quite quickly and shall be continuously restored;**
4. The procedure is completed only when no more air bubbles can be seen in the oil or after emptying the reservoir at least three times.

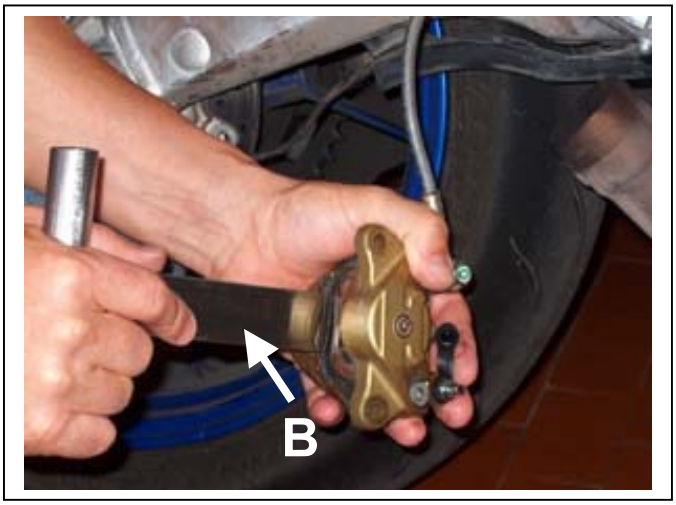
Bleeding procedure on Cylinder side:

1. Disconnect collector (A) from calliper and set calliper in a position as low as possible, as shown in picture 3;
2. Fit spacer/retractor tool (B) in-between the pads and hold it while pulling the brake lever until pads bite;
3. then turn the tool (B) so that pistons will completely seat back in the calliper.

WARNING At this stage fluid level will increase up to maximum level and include any air bubbles remained in the master cylinder top section.

Bleeding is completed when no more air bubbles can be seen and lever will no longer feel "spongy".

Picture 3



GGP procedure:

Necessary labour time for the indicated bleeding procedure is **20 minutes**.

To obtain reimbursement, you must use the GGP system, in which you should enter the servicing intervention using the suitable function "Enter Campaign Serv." that you find within the menu, inside "Servicing / Campaigns".

If the vehicle does not appear to be included in this campaign, please contact the Technical Service.

Best regards

Piaggio & C. spa
Aprilia Brand