Eliminazione centralina ABS-III da BMW R1150GS ‘02

Riassunto dal forum http://www.ukgser.com/forums/showthread.php?t=138600

Gordon **14-march-2008** **R1150GS ‘02**
Help please!! Ongoing Servo/ABS problems.

1150 GS 2002 ABS and Servo. Ignition switched on and self checking starts.
1. Lower brake warning triangle light stays on.
2. Upper brake failure light flashes rapidly, servo whines, light slows momentarily then flashes rapidly again (forever).
3. Pressing front lever triggers servo and rear brake light.
4. Pressing rear lever does not trigger servo but brake light comes on.
5. ABS relay in fuse box ticking in time to rapidly flashing brake failure light.

So far - checked:
1. Rear brake light switch - working fine.
2. Fluid levels in both brake reservoirs and in the servo reservoirs - all fine.
3. Levers not hampered in movement e.g. not hitting hand guards.
4. Battery fully charged and starting bike.
5. Taken bike for 20 mile run - front brake fine. Rear brake - residual braking only.
6. I ordered a new ABS relay (at £6) - don't know if this will solve problem.

Don't know whether resetting ABS will do any good, but all instructions I can find are for non-servo model with a brown-blue wire (at number 2 pin).
My diagnostic plug is blanked at No 2 and has no brown/blue wire.

Is it time to get to a dealer????

Yossarian **14-march-2008**
Yes, it is time to get the fault codes read to a dealer.

Steptoe **14-march-2008**
It's not the ABS that’s the problem. It's the servo.

mermoto **14-march-2008**
ABS-Servo fault codes:

- Gen OFF, ABS ON = Only residual braking in both circuits.
- Gen OFF, ABS flashes at 1Hz = ABS not available. Pull-away test not completed.
- Gen OFF, ABS flashes at 4Hz = Only residual braking function available in both circuits.
- Gen ON, ABS off = Rear light/brake light defective.
- Gen ON, ABS flashes at 1 Hz = At least one brake circuit without ABS.
- Gen ON, ABS flashes at 4Hz = At least one brake circuit in residual braking function mode.
- Gen AND ABS flashing alternately at 1Hz = Fluid level in Intergral ABS too low. Low-voltage.

Gordon **14-march-2008** **R1150GS ‘02**
Gen ON, ABS flashes at 4Hz = At least one brake circuit in residual braking function mode.
This is the one.

ELIMINATOR 14-march-2008
Someone has binned the servo, and connected up brake lines direct to the master cylinder.
http://www.ukgser.com/forums/showthread.php?t=108423&highlight=servo+removal
http://www.ukgser.com/forums/showthread.php?t=106754

You'll need an inline banjo bolt brake switch as well.
Plus either remove the relay for the servo? or remove the bulbs for the warning lights.

delpel 18-may-2007 R1150GS
I did it and it's a piece of piss.

Firstly - take all the servo crap of the bike and sell it on eBay.

Secondly - purchase a distribution piece BMW part number 34327650965 and connect the line coming from the master cylinder to the line going to the front brake calipers.
Leave the flexible lines in place just connect them together.

Thirdly - connect the rear brake line to the rear master cylinder. It fits straight on.

That's the brake hydraulics sorted now for the brake light electrics. Believe it or not, this is the complicated bit.

On the Servo/ABS model the brake light switches are different. They are normally closed and the switch contacts open when you pull/press the lever. The servo senses this and does it's stuff.
You need to replace both switches with Non-Servo/ABS ones. These switch contacts are normally open. You pull/press the lever and they close and apply 12volts to the brakes.

So you need to hack into the wiring and find the 12v wire coming from Fuse 1, route this to the switches and on to the brake light bulb.

Gordon 15-march-2008 R1150GS '02
Thanks, Eliminator. I made the decision yesterday to bin the servo and started work on this today.
Back brake caliper now connected directly to rear master cylinder, bled and working a treat.
I will order the brake switches and 'splitter' on Monday and complete the hydraulics on the front brake next week.
I have run in some wiring to the fuse box and rear stop light ready to link up the switches.
Servo will lift out creating a lovely free space and a few kg of weight.

Would rather have had ABS but feel that I will have a simple and more reliable braking system and avoided spending £1400 on something that might go wrong again.

ELIMINATOR 15-march-2008
My servo is the third one fitted to the bike.

1) Whilst within warrantee I started up as usual, rode the 50' to the junction, NO BRAKES No warning lights until it eventually stopped.

2) Six weeks later, see 1)

Took some time to regain any faith now on 38,000 miles. Be interesting to see how much this has cost you, both in time & money. Might be good idea as Steptoe said, to remove servo & sell it on.

Gordon 15-march-2008 R1150GS '02
Switches are £23 and £20, and front brake pipe connector is £46 so the whole lot is £89 excluding postage. Ordered today from Motorworks so expect parts by Wed/Thurs.
Have used existing brake pipes and hoses.

Time so far:
- Rear brake hydraulics took 30 min to complete.
- Running wire to rear brake light took 25 min (removed tool tray and fed new wire into loom and connected to rear stop light spade).
- Removed of existing brake switches took a further 30-40 min.

All done at a leisurely pace. Should see job completed in 1-2 hrs (famous last words).

Gordon 21-march-2008 R1150GS '02
Well, job done. How I did it for my bike was as follows:

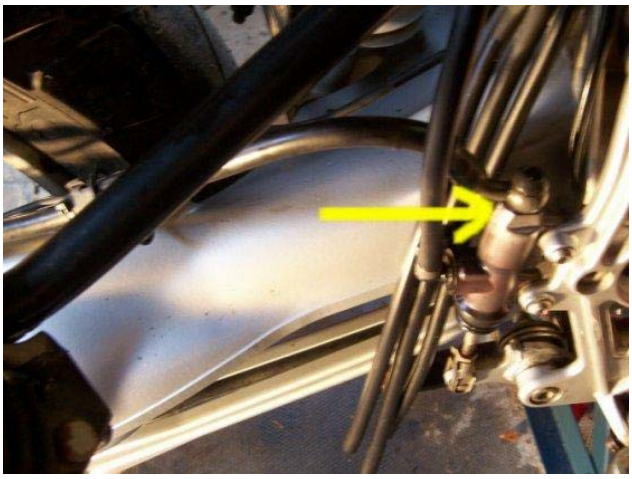
Preparation. Make sure that you have all of the parts you need or (like me) order them as you go along. The parts I needed were:

a. Conventional front brake switch (non-ABS)
b. Conventional rear brake switch (non ABS)
c. Front hydraulic brake distribution unit (union) (non ABS)
d. DOT 4 Brake fluid
e. Brake bleeding kit
f. Wiring, connectors, soldering iron and solder
g. Circuit tester
h. Big bag of tools

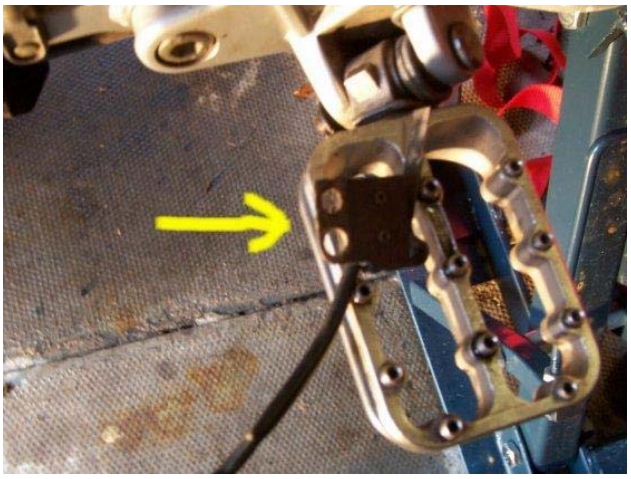
Total cost of BMW parts was £89 and got these from Motorworks. Have your chassis number when you call. Wiring etc cost about £8 from Maplin. Rest I already had.

I removed the seat, petrol tank and tool box in order to get ready access to wiring looms.

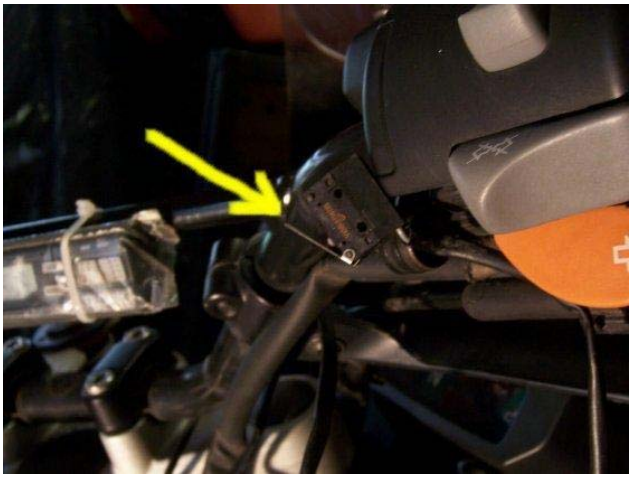
1. Rear Brake Hydraulics. This was simple. I disconnected the rear pipe and connected it directly onto the master cylinder. Bled the brakes and that was it - job done (pic 1)



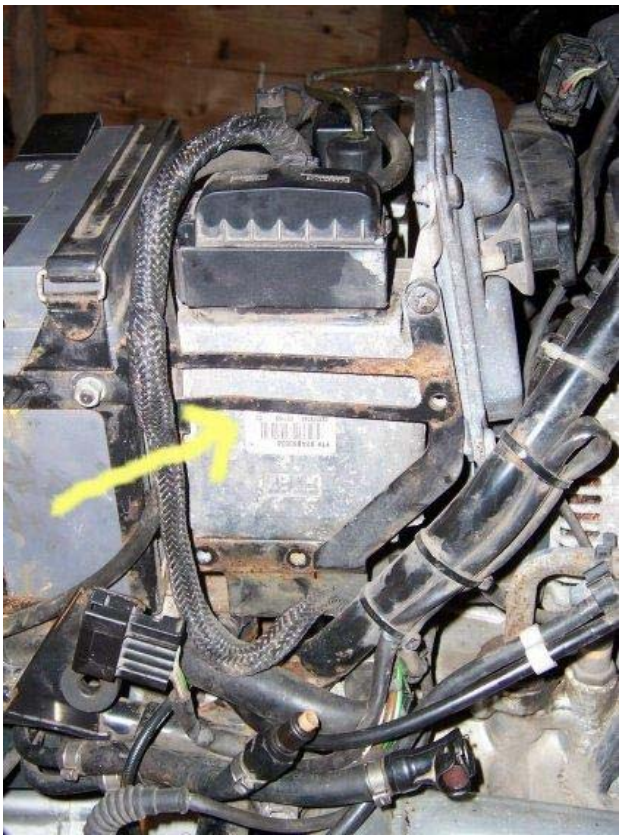
2. Next step was to remove the rear brake switch which is situated behind the RH footpeg (pic 2)



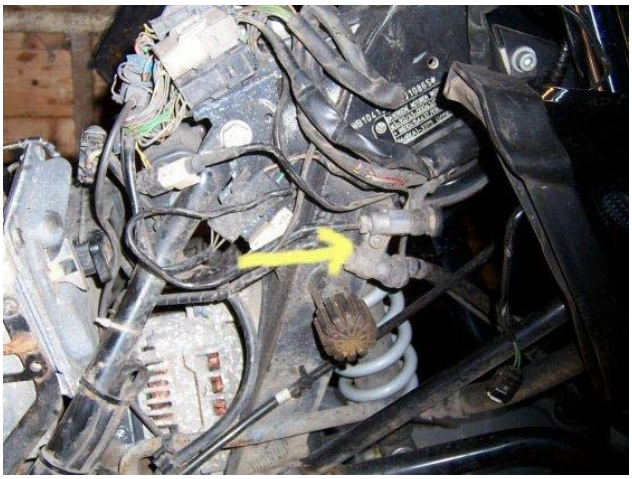
3. The front brake switch also needs to be removed from beneath the RH grip (pic3)



4. Eventually (but not yet) the faulty unit will be removed (pic 4)



5. This distribution piece will be replaced with a non-ABS part (pic 5)



Brake switches were exactly the same shape and size as those that had been removed, so fitting them was a reversal of removing the old ones. The tricky bit was wiring them up.

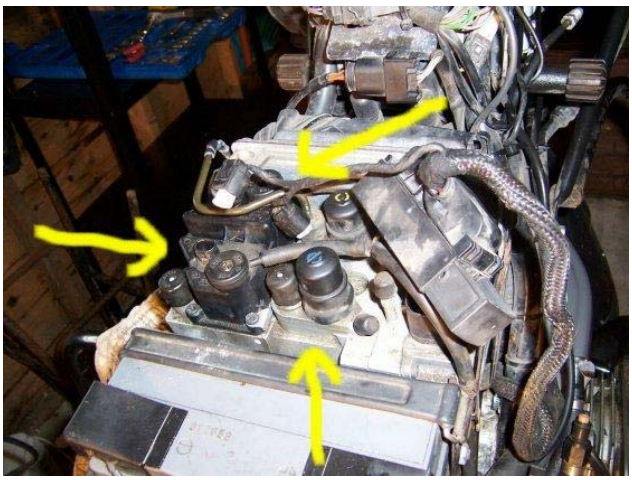
I opened the fuse box (undoing 4 screws gives access to the wiring looms) and wired both switches up as non ABS switches using the wiring diagrams in the Haynes manual.
I also did this for the tail light (different fuse).
This involved running some new wiring and making some connections, not so complicated.

1 = Non ABS front brake hydraulic distribution unit with bleed nipple added.
(nipple MUST be ordered as a separate item).

2 = rear brake light switch.

3 = front brake light switch.

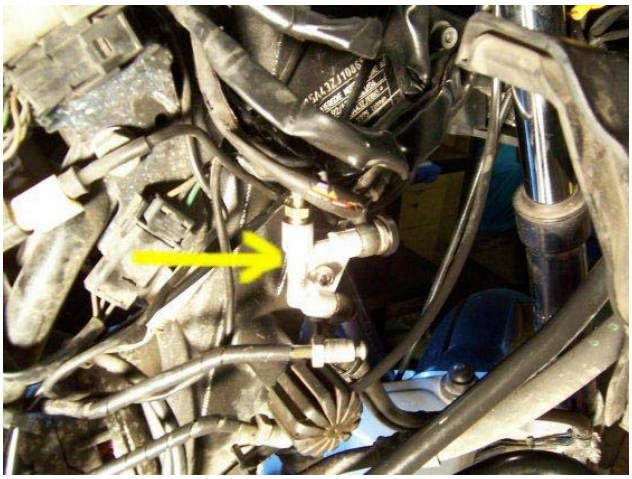
Servo unit still there but not for long!!



Time to focus on fitting the front brake distribution unit.

This was straight forward and the master cylinder pipe fitted onto the upper part of the unit and the feed to both calipers onto the lower part.
The bleed screw was fitted to the upright part.

Once everything was in place and tightened the brakes were bled.



Should have said earlier that a 'best buy' was a bike lift - great buy at £40.

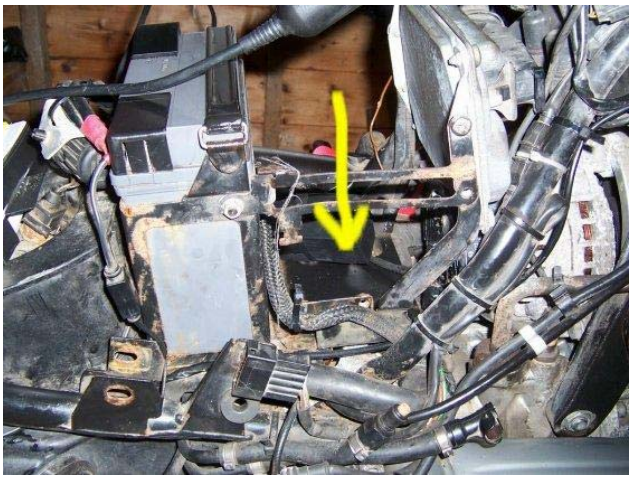
Some tidying up was needed.

All redundant pipe work was removed.

The fault unit was unplugged and the retaining bolts at the bottom of the unit removed.

The big electrical plug was uncoupled and the whole unit removed leaving a big space.

Care should be taken to catch spills of brake fluid during this and earlier hydraulic work.



And finally!

Both brakes feel firm and all electrics working.

Old unit removed and all pipes and cabling tidied.

ABS relay removed from fuse box.

No brake warning lights active so no need for masking off lights.

Everything being refitted.

I am not a mechanic and no expert but with a little care and patience this is a job than can be done.

Old unit removed and ready for the scrapheap

Conclusion.

Bike ready for a road test. I took the bike for a brakes check and put the bike on rolling road.

After 20 mile run. I have never been hard on brakes and can honestly feel no difference.

After about 70 miles. I am happy with result. The conclusion was impressive.

Money saved has allowed me to buy a half price Autocom 300, a new Kenwood TK 3201 radio for bike to bike communications, all the cables to connect up my GPS and I still have £1100 left!!

The stand goes to a maximum of 17” (43 cm) in height and makes working on the bike much easier. I positioned it under the sump (left the guard on), with the main stand up, sliding the jack in from the RHS.

I used a wooden board to spread the load and it worked fine.

Once the jack takes the weight I straighten the bike off the side stand, and it balanced neatly on the board. I then attached the 4 ratchet straps (supplied with the jack) to secure the bike to the jack and raised the bike to maximum height.