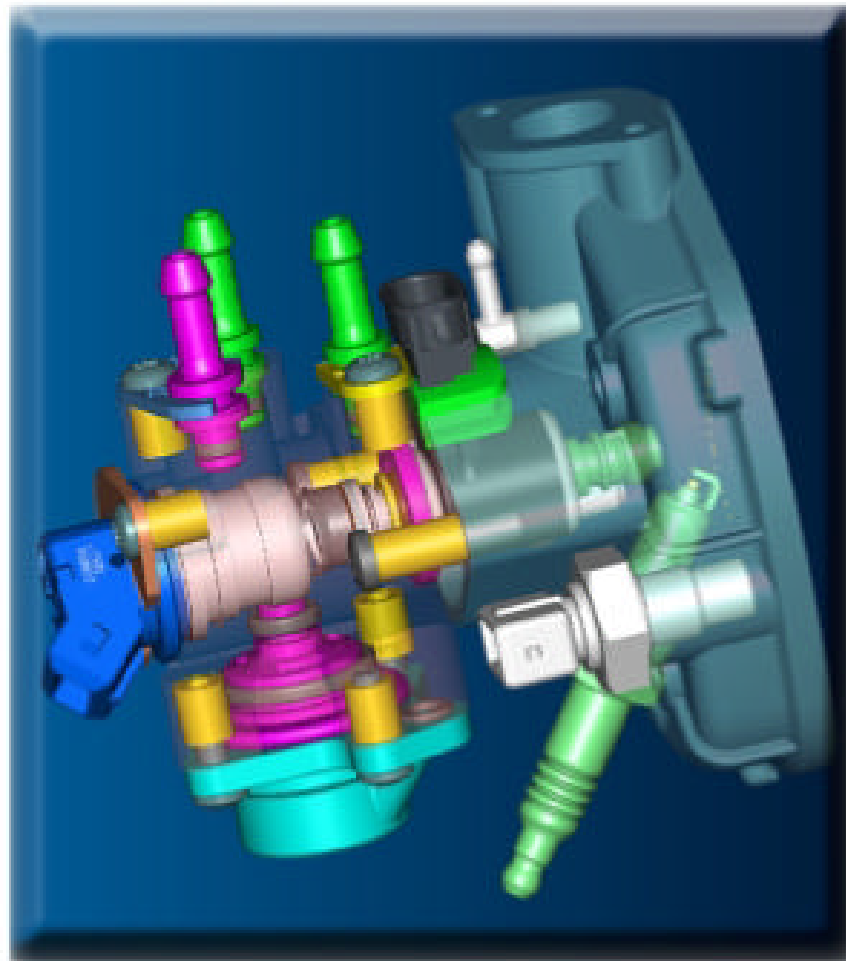


UPDATING

aprilia

SR E SCARABEO DITECH, SR 50 i.e



Game Boy cartridge version 2.7.1

➔ The new 2.7.1 version, available from February 2004, solves the problem of the wrong detection of error 23

“AIR PRESSURE SENSOR“

appearing on model SR 50 i.e. (C361M).

Using the Game Boy in case of diagnosis:

➔ To avoid any error cancellation - such as when the Game Boy version is more updated than that stored in the vehicle ECU - we recommend you to use the instrument cluster warning light to read the failure codes.

We also suggest you to write the new mapping number close to the Game Boy connector every time the control unit is re-programmed with the Game Boy.

Using the Game Boy in case of diagnosis:

➔ Mappings which have been updated with the Game Boy 2.7.0 or later versions differ from the previous versions as:

- 1) fuel pump is operated for about 8 seconds when the key is turned to ON (on previous versions this time period was 4 seconds only).
- 2) the engine is fired about 4 to 5 seconds after starting.

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SCARABEO 50 Ditech

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Air cleaner:

➔ To allow engine to benefit from the whole filtering cartridge surface, we recommend to remove the intake pipe section located inside the filter box.



Part to be removed

SR e SCARABEO DITECH

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Recommended spark plugs in case of condensation inside the air system:

**→ SR and SCARABEO DITECH
Aprilia NGK-CR7EKB
(part no. 8560146)**



Short-circuited spark plug due to condensation:

- ➔ **Condensate can easily develop when the vehicle is used for short trips and at low rpm, when it is frequently started and switched off, and when very aggressive oils are used.**
- ➔ **We recommend to use IP PRO GPX2 or AGIP CITY 2T.**

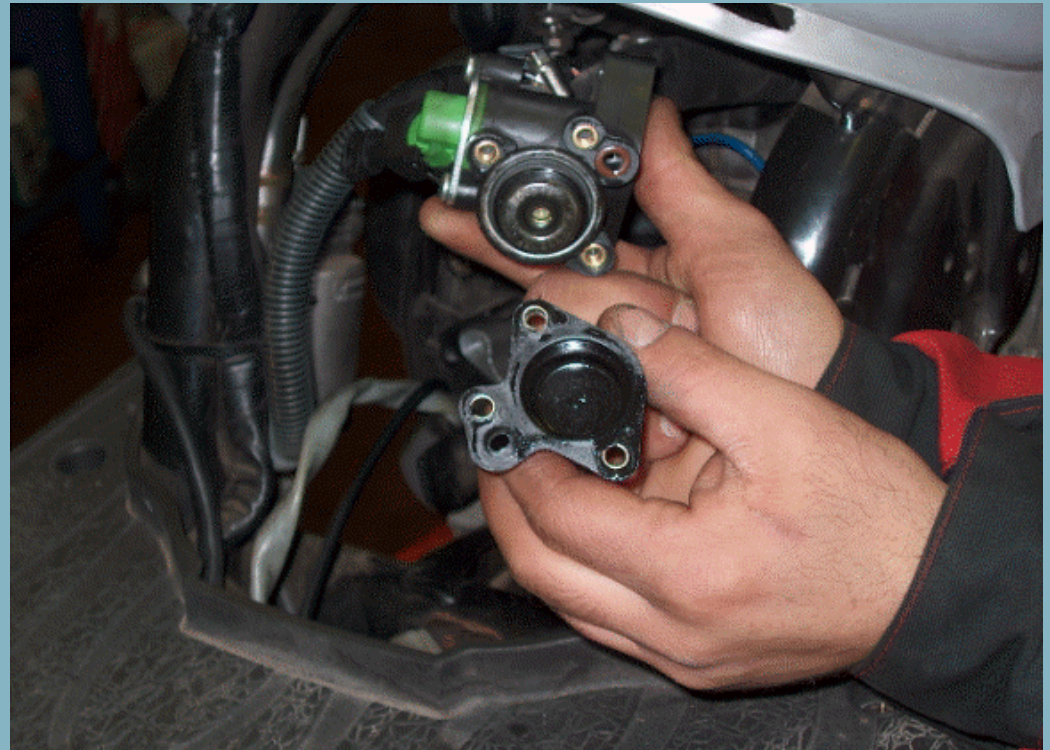
Short-circuited spark plug due to condensation:

- ➔ Remove fuel rail from engine and look for condensation between fuel and air injectors.



Short-circuited spark plug due to condensation:

➔ In case of condensation, remove pressure adjuster housing and clean the circuit. At reassembly, take special care to the two OR-seals.



NOTE. Threaded inserts were removed during manufacturing

Short-circuited spark plug due to condensation:

- ➔ Remove air injector, clean-off any deposits, re-assemble the fuel rail and, during starting, check for spraying shape regularity in the air and for injector correct mechanical sealing (no leaks).



Short-circuited spark plug due to condensation:

- ➔ **Remove air injector and follow the same procedure to check for linear flow and for fuel injector correct mechanical sealing.**

Compressor check:

- ➔ **Before carrying out this check, make sure that the battery is fully charged and disconnect spark plug cap from spark plug (WARNING: use a cable to connect spark plug cap to frame so as to avoid any discharges in the air!).**

Compressor check:

- ➔ **Connect a pressure gauge with the end-of-scale set at 6 bar directly to the compressor, clamp the downstream pipe and start the engine. Keep on starting the vehicle and check that instrument pointer reaches 3 bar in 10 seconds and that it goes to the end-of-scale.**



Compressor check:

- ➔ Turn the key to OFF and then check that pressure does not decrease too quickly, and that pressure reading settles between 1.5 and 2.0 bar.
- ➔ If this is not the case, the malfunction lies in the compressor.

The following parts will not affect this procedure:

- 1) Open reed valve
- 2) Worn cylinder and piston and/or piston rings
- 3) Clearance at crankshaft bearings and/or oil seals

Compressor check:

- ➔ Remove pin and bearing.
- ➔ Remove piston and check for any possible seizure. Check also that the piston ring open end is positioned opposite to the air holes on cylinder bottom



(WARNING: the “SR 50 i.e. (C361)” compressor is slightly slanting, compared to Aprilia compressor).

Compressor check:

- ➔ Check for one-way valve sealing at the compressor cylinder bottom.



Checking operating pressures:

- ➔ **Connect pressure gauges to air (6 bar) and fuel (12 bar) systems, turn the key several times to ON to bleed any air then, with the key to ON.**
- ➔ **Check that fuel pressure gauge pointer is at about 2.3 – 2.6 bar.**
- ➔ **Start the vehicle and check, at idle speed, that air pressure is at 4.5 bar and that fuel pressure is at least 2.5 bar above that value.**

Checking operating pressures:

- ➔ **Example:**
air pressure 3.5 bar
fuel pressure 6.0 bar
- ➔ **There is a failure at the air system, while the fuel system works properly.**



Insulated compressed air pipe:

- ➔ To reduce any condensation inside the air system, we recommend to change the original pipe with an insulated pipe featuring an inner tubing allowing to reduce the through section and, at the same time, increasing air flowing speed.

This pipe is available at Aprilia Technical Service Dept.

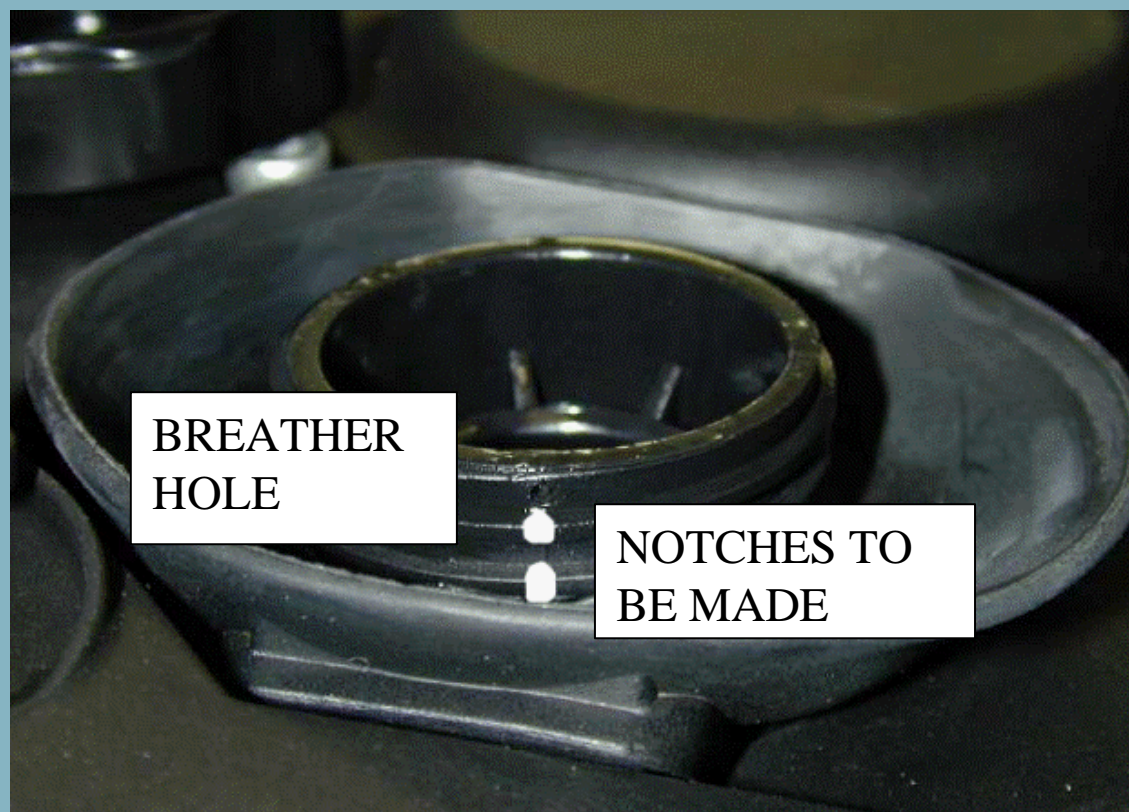


Breathing fuel tank:

- ➔ Engine erratic operation that, in some cases could lead to vehicle switching off, can be caused by an unsuccessful fuel tank breathing. Fuel tank filler cap could prevent air from flowing out through the special hole on filler plug itself.
- ➔ To make sure that an unsuccessful fuel tank breathing is the real cause of the problem, simply loosen filler cap and observe if the problem disappears.

Breathing fuel tank:

➔ To solve the problem, make a notch on filler lower threads – close to the small hole - all the way to plug end so as to create a passage for air to the outside.



Adjusting the mixer pump:

- ➔ Using a wire, secure sheaths to adjuster so as to ensure mixer excellent adjustment and to prevent any exceeding oil from leaking out.

