TECHNICAL NOTE No. 001-2007 **06-07-2007**

Model: RS 125 2006 Euro 3

Subject: Changes for competitive (track) use, only

Dear Dealer,

we hereby inform you that the new RS 125 2006 euro 3 ZD4RD…… (11 KW version**)** can be changed for competitive use only

NOTE
The following changes are to be made only for sports competitions.
Modified vehicles DO NOT have to be used on public roads, as they are NOT TYPE-APPROVED.

NO WARRANTY
The below-listed parts are for competitive use, only. Modified vehicles are thus not covered by any warranty.

WARNINGS
- Switch ignition off/ remove the key from ignition switch.
- Take engine switch to STOP.
- Allow engine and exhaust system complete cooling to avoid scalds
- Remove battery cables only when the ignition system is off.
  First disconnect the negative pole - and then the positive one +
- Any considerable modification must be carried out by specialised personnel
- It is recommended to follow the assembly instructions specified in the literature as well as the general principles for safety and accident prevention further to any applicable law provision.
  Battery content is corrosive
- Before reassembly, ensure no parts are missing
- After assembly, ensure that parts are correctly tightened and work properly

Parts list:

POSITION	CODE	DESCRIPTION	Q.TY
1	AP0230810	VALVE GUIDE OIL SEAL	1
2	AP0230880	O-RING 13.3-2.4	1
3	AP0239052	SPRING	1
4	AP0241930	ALLEN SCREW M6X20	2
5	AP0250975	SEAL 0.8	1
6	AP0253465	VALVE BODY	1
7	AP0253722	GUILLOTINE-TYPE VALVE	1
8	AP0297830	SPARK PLUG NGK BR10EG	1
9	AP0845020	SPRING WASHER B6	2
10	AP0860460	RUBBER CAP	1
11	856101	MAX. JET 185	1
12	856102	TAPER NEEDLE d53 at 1st notch	1
13	856103	MIN. JET S45	1
14	856104	THROTTLE VALVE 50	1
15	AP8112567	RAVE CONTROL SOLENOID VALVE	1
16	AP8114175	RAVE TRANSM.CABLE	1
17	854588	MUFFLER RS 125 FP	1
18	AP8120405	RUBBER ELEMENT	2
19	AP8121736	T-BUSHING	2
20	AP8121738	SPLIT PIN	1
21	AP8132869	SOLENOID VALVE HOLDER PLATE	1
22	AP8150013	WASHER 5.5X15X1.2 GEOMET GEO 5	2
23	AP8150451	NARROW SELF-LOCKING NUT M5	4
24	AP8152268	SOCKET HEAD SPECIAL SCREW Z M5 X 16 WHITE	1
25	AP8152269	SOCKET HEAD SPECIAL SCREW Z M5 X 20 WHITE	1
26	AP8152272	HEX.HEAD FLANGED SCREW M5X12 GEOMET GEO 5	4
27	AP8120748	FREE SUCTION LUG	1
28	AP0236064	SPROCKET Z=17	1
29	AP8120416	PLASTIC TIE 4.5X170	2

Muffler - rave parts installation procedure

INSTALLATION PROCEDURE:

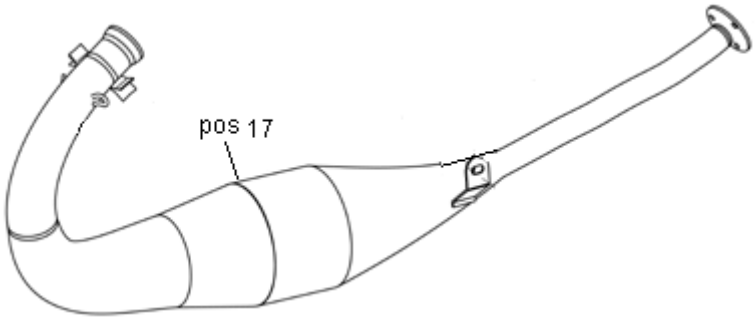
- Remove the fuel tank
  to gain access
  for assembling the rave kit
  and remove the battery

- Remove the battery and its mount

WARNING
Keep the battery in vertical position
so as to prevent any fluid leakage.

- Remove seat and tail guard
  remove the control unit and drill a
  through hole as shown

- remove side panels
  remove exhaust unit to change
  muffler (ref. 17)



  replace muffler

  852145
  with muffler
  854588

- close the secondary air tube using a tie (as shown)

- remove carburettor for jets setting and replacement

DESCRIPTION	11 KW	FULL POWER
FULL-POWER JET	**132**	**185** (ref. 11)
CONICAL ROD	**D49/5”**	**D53/1"** (ref. 12)
MIN. JET	**U36**	**S45** (ref. 13)
THROTTLE VALVE	**45**	**50** (ref. 14)
Mixture screw	**1-3/4**	**2-1/4**
To ensure correct operation of engine, idle should be set to 1200 rpm with engine warm, after accelerating two or three times up to 3000 rpm		

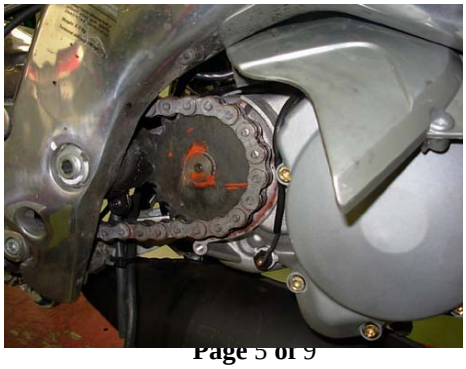
- change spark plug

DESCRIPTION	11 KW	FULL POWER
SPARK PLUG	**NGK BR8ES**	**NGK BR10 EG** (ref.8)

- Replace the free intake lug on the air box (ref. 27)

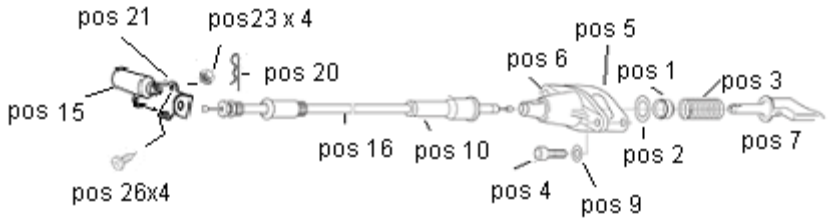
  with the one supplied with the kit, featuring two open holes

- change the original 16-tooth sprocket with the 17-tooth one supplied in the kit (ref. 28)

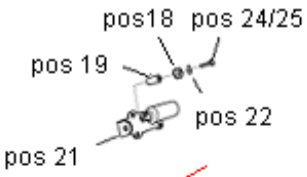


- **Rave Valve Assembling**

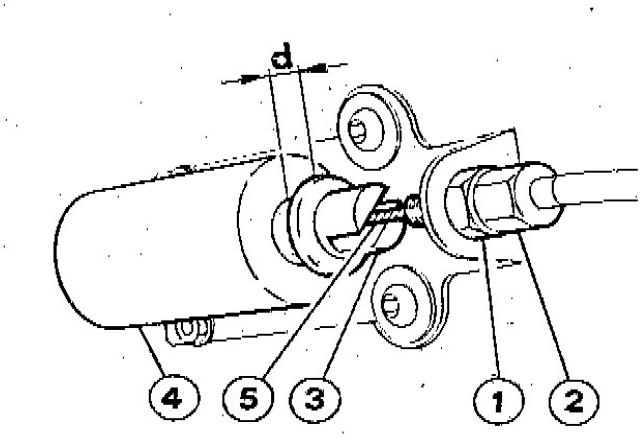
  - Assemble kit as shown on the drawing



- Position solenoid valve (ref. 15) on front RH side, and secure it with bushing (pos 19), rubber element (pos 18), washer (pos 22) and screw (pos 24/25) to battery holder plate



- Adjust solenoid and rave valves.



1) loosen adjuster nut (1);
2) fully loosen adjuster (2);
3) pull cable (5), and drive piston (3) fully home onto solenoid

valve (4); cable will be tensioned, and rave valve will be open;
4) with the piston in this position, screw adjuster with a 0.5 mm clearance on the sheaths,
5) tighten adjuster nuts;
6) To make sure that this procedure has been correctly carried out, check that when the piston is in rest position the distance (d) ranges between 7.5 and 8.5 mm.

PERIODICAL CHECKS

In normal conditions of use, to ensure RAVE valve correct operation, proceed as follows:
1) after the first 1000 Km, check RAVE valve and clean it, if necessary
2) every 4,000 Km, adjust the RAVE valve (according to the maintenance schedule)

CLEANING

If the valve is **NOT** blocked
1) Loosen the Allen cheese-headed screws with an Allen wrench and remove the whole valve body from the cylinder;
2) Clean scale from guillotine-type valve and cylinder holes using non-metallic tools.

If the valve is blocked, **DO NOT force the valve out in any case,** and proceed as follows
1) Spray suitable scale solvent into valve seat
2) Allow the solvent to react
3) Remove the valve without forcing
4) Clean scale from guillotine-type valve and cylinder holes using non-metallic tools.

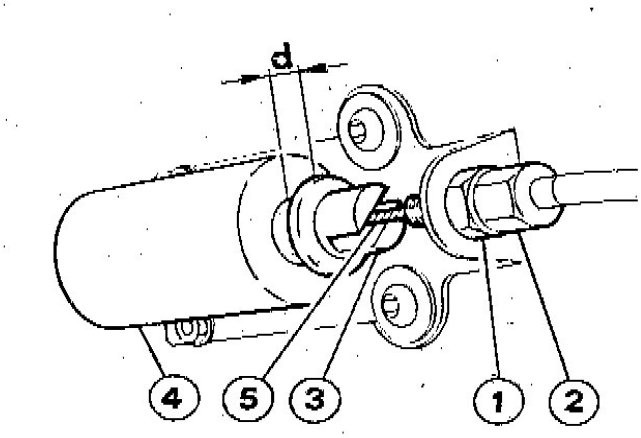
REASSEMBLY

Carefully reassemble, and ensure not to lock the valve when tightening the Allen cheese-headed screws, ensure it slides smoothly.

ADJUSTMENT

Valve opening and closing are controlled by a solenoid valve that, due to a potential difference, magnetically draws the piston connected to valve cable. To ensure system correct operation, cable shall be

carefully adjusted as follows (see figure):



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5. tighten adjuster nuts;
6. To make sure that this procedure has been correctly carried out, check that when the piston is in rest position the distance (d) ranges between 7.5 and 8.5 mm.

MIXER OIL TO BE USED

AGIP SPEED 2T is a **fully synthetic** low-smoke lubricant suitable for top-performance 2-stroke engines, formulated from synthetic base and a specific blend of additives. Optimised for road bike engines.

AGIP SPEED 2T is formulated from synthetic base that cleans all engine parts and reduces engine wear.
The product is detergent and thus reduces sludge and scale formation over any engine part and prevents piston rings from sticking.

Using oils with specifications different than above (especially mineral oils) could result in carbon deposits blocking the valve leading to engine seizure.

Carburettor setting - 11 kW

In case vehicle has to be restored to its original conditions, set carburettor as follows:

Item	11 kW
Max. jet	132
Min. Jet	U36
Sprayer	HN268
Needle (notch)	D49 (4th notch)
Valve	45
Mixture screw pos.	1 ¾ turns
To ensure correct operation of engine, idle should be set to 1200 rpm with engine warm, after accelerating two or three times up to 3000 rpm	

Best regards

Piaggio S.p.A.
Aprilia Brand