

## CUSTOMER INFORMATION

### COMPLAINTS ON EVO ENGINE SERIES

**Dear customer,**

By end of 2014, after completing the development and testing program, BRP-Rotax has launched the new Rotax evo engine series to the market.

Beside a principal positive feedback of the market we have received various complaints on component failures and instable function of the engine.

The main complaints have been related to

- 1) electronic timed exhaust valve not working properly
- 2) failures of the new evo con rod
- 3) failures of the cable harness resulting in an instable function of the engine.

We would like to provide you following comments regarding these matters.

#### **1) ELECTRONIC TIMED EXHAUST VALVE**

At the start of serial production we have supplied engines to the market where the crank case pressure has been used to close the exhaust valve (spring below the exhaust valve piston).

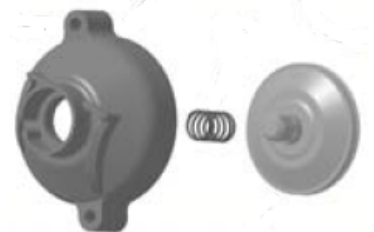
The ambient pressure at different altitudes caused a temporary unstable function of the exhaust valve.

To assure a stable function and accurate timing of the exhaust valve, Rotax has taken the decision to change the system and using the crankcase pressure to open the exhaust valve (spring on top of the exhaust valve piston).

As of following engine serial numbers the updated system is supplied as original equipment.

8398316 (125 MAX evo)

8382456 (125 MAX DD2 evo)



For all 125 MAX evo, 125 MAX DD2 evo and evo upgrade kit “e-exhaust valve” which have been supplied before, we offer since May 2015 an update kit (Rotax 481 265) free of charge via our service network.

If you have any doubt on the proper function of the e-exhaust valve, please contact your Rotax service center/dealer regarding support.

## 2) EVO CON ROD

With the evo engine series Rotax has introduced a new con rod which has been designed with a clear focus to improve the durability of the big end bearing. All tests for the start of the serial production have been positive confirmed that we have reached our development goal.

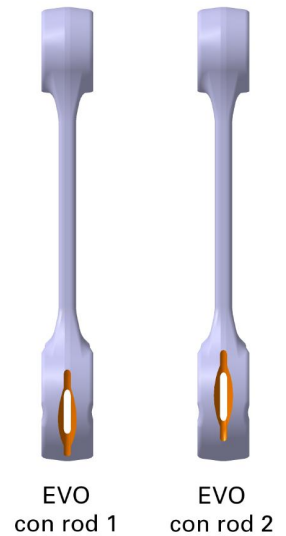
With the beginning of the racing season we have received complaints of failed evo 1 con rods.

These con rod failures have been analyzed and out of this the design of the evo 1 con rod has been slightly modified (= evo 2 con rod). This modification has significantly improved the durability of the con rod regarding the failures occurred on the market with evo 1 con rods.

As of following engine serial numbers the new evo 2 con rod is fitted as original equipment.

8398340 (125 Micro MAX evo, 125 Junior MAX evo, 125 MAX evo)

8382455 (125 MAX DD2 evo)



In the specific case of an evo 1 con rod failure, Rotax will accept warranty claims up to 12 months from date of purchase of the product (as an extension to the regular Rotax manufacturer's warranty of 6 months).

### Special offer

Customers owning a Rotax engine with an evo 1 con rod fitted will be offered, an evo 2 con rod kit free of charge if they would like to renew the con rod kit at the annual engine overhaul.

This offer will be valid until end of February 2016.

If you have any concern regarding the con rod fitted to your Rotax engine we ask you to contact your Rotax service center/dealer to verify your specific situation.

## 3) EVO CABLE HARNESS AND ELECTRICAL COMPONENTS

We have carefully analyzed reported failures of OFF/ON/START switches and cable harnesses in the field.

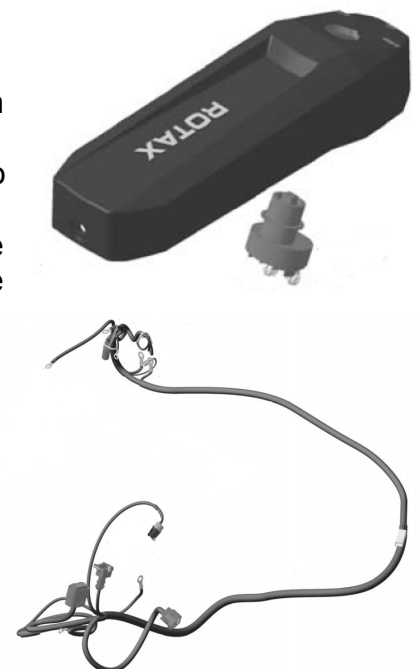
The claimed OFF/ON/START switches have failed due to an internal contact failure.

The technical design of the internal contact has been modified to ensure a faultless function.

A failure of the OFF/ON/START switch is covered under the regular Rotax manufacturer's warranty. A failed switch will be replaced by a switch with improved design.

The claimed cable harnesses showed either broken connectors (ground wire, starter relay) or internal contact failures in connectors.

The vibration of the electrical components (ECU, ignition coil, magnet valve), caused by engine and vehicle vibrations, can have a negative impact on the durability of



the cable harness (depending on the installation of the cable harness in the kart). The cable harness has been modified in the critical areas to ensure durability and faultless function.

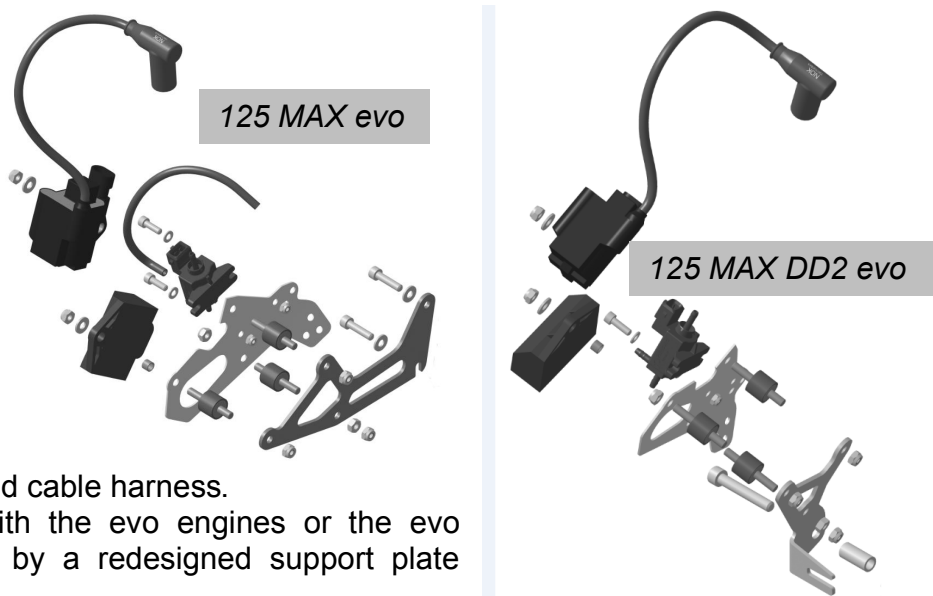
A failure of the cable harness is covered under the regular Rotax manufacturer's warranty. A failed cable harness will be replaced by a cable harness with improved design (as of January 2016).

A lower vibration level of the electrical components (ECU, ignition coil, magnet valve) has a significant impact on the durability of the cable harness.

To minimize the vibration level of the electrical components BRP-Rotax will initiate an exchange campaign for the support plate which carries the ECU, ignition coil and magnet valve in combination with the improved cable harness.

The support plate supplied with the evo engines or the evo upgrade kits will be replaced by a redesigned support plate system (see illustrations).

This exchange campaign will start in January 2016.



We ask you to contact your Rotax service center/dealer to arrange the exchange campaign for the support plate and cable harness.

BRP-Rotax is confident that the combination of improved cable harness and redesigned support plate system will provide a durable solution resulting in a stable function of the evo engines.

Finally we would like to point out that we are very sorry for any inconvenience caused by the technical problems during the introduction of our new evo engine series.

Taking our responsibility serious we are offering the above mentioned support programs and are hoping for your continued loyalty as a ROTAX customer.

Best regards,

BRP-POWERTRAIN GMBH & CO KG