

SERVICE INSTRUCTION

Introduction of new spark plug part no. 297656 and spark plug connector part no. 265249 for ROTAX® Engine Type 912 i, 912 and 914 (Series)

ATA System: 74-00-00 Ignition system

1) Planning information

To obtain satisfactory results, procedures specified in this publication must be accomplished with accepted methods in accordance with prevailing legal regulations.

BRP-Rotax GmbH & Co KG cannot accept any responsibility for the quality of work performed in accomplishing the requirements of this publication.

1.1) Applicability

The new spark plugs and spark plug connectors have been already installed on the following ROTAX® engines:

Engine type	Serial number
912 A	from S/N 4411409
912 F	from S/N 4413102
912 S	from S/N 9564321
912 UL	from S/N 9580006
912 ULS	from S/N 6786601
914 F	from S/N 4421710
914 UL	from S/N 9576014
912 iS Sport	from S/N 7704206
912 iSc Sport	from S/N 7702101

NOTE: It is not mandatory to retrofit engines which are currently equipped with old spark plug types and old spark plug connector types.

NOTE: In case of interchange/repair/maintenance it is not allowed to exchange individual parts. Mixing of spark plug types and spark plug connector types is not allowed. All spark plugs and spark plug connectors must be of the same part number for the entire engine.

1.2) Concurrent ASB/SB/SI and SL

None

1.3) Reason

In the course of continuous development and standardization, a new spark plug (part no. 297656) and new spark plug connector (part no. 265249) has been introduced.

1.4) Subject

Introduction of a new spark plug part no. 297656 and spark plug connector part no. 265249 for ROTAX® Engine Type 912 i, 912 and 914 (Series).

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1.5) Compliance

None - for information only



Non-compliance with these instructions could result in engine damages, personal injuries or death

1.6) Approval

The technical content of this document is approved under the authority of DOA ref. EASA.21J.048.

1.7) Labor time

Estimated labor hours:

Engine installed in the aircraft - - - labor time will depend on airframe installation and therefore no estimate is available from the engine manufacturer.

1.8) Mass data

change of weight - - - none.

moment of inertia - - - unaffected.

1.9) Electrical load data

No change

1.10) Software modifications

No change

1.11) References

In addition to this technical information refer to current issue of:

- In general Operators Manual (OM)
- In general Illustrated Parts Catalog (IPC) and in particular:
Chapter 74-00-00
- In general Maintenance Manual Line (MML) and in particular:
Chapter 05-20-00 and 12-20-00
- In general Maintenance Manual Heavy (MMH) and in particular:
Chapter 74-20-00

NOTE:

The status of the Manuals can be determined by checking the table of amendments. The 1st column of this table shows the revision status. Compare this number to that listed on the ROTAX WebSite: www.FLYROTAX.com. Updates and current revisions can be downloaded for free.

1.12) Other Publications affected

None

1.13) Interchangeability of parts

All parts are interchangeable.

2) Material Information

2.1) Material- cost and availability

Price and availability will be provided on request by ROTAX® Authorized Distributors or their independent Service Centers.

2.2) Company support information

None

2.3) Material requirement per engine

parts requirement:

Fig.no.	New p/n	Qty/ engine	Description	Old p/n	Application
1	297656	8	Spark plug	897255 / 297940 / 881330	Ignition system
2	265249	8	Spark plug connector	265248	Ignition system

2.4) Material requirement per spare part

None

2.5) Rework of parts

None

2.6) Special tooling/lubricant-/adhesives-/sealing compound/price and availability

Description	Application
Wire feeler gauge	Spark plug gap
Pull scale	Spark plug boot "pull off" force

3) Accomplishment/Instructions

- ROTAX® reserves the right to make any amendments to existing documents, which might become necessary due to this standardization, at the time of next revision or issue.
- NOTE: Before maintenance, review the entire documentation to make sure you have a complete understanding of the procedure and requirements.

Accomplish-
ment

- All measures must be implemented and confirmed by at least one of the following persons or organizations:
- ROTAX® - Airworthiness representatives
 - ROTAX® - Authorized Distributors or their independent Service Centers
 - Persons approved by the respective Aviation Authorities
 - Persons with approved qualifications for the corresponding engine types. Only authorized persons (iRMT, Level Heavy Maintenance) are entitled to carry out this work
 - Persons with type-specific training
- NOTE: Indicates supplementary information which may be needed to fully complete or understand an instruction.

NOTICE

All work has to be performed in accordance with the relevant ROTAX® Instructions for Continued Airworthiness (ICA) of the respective engine type.

General

Further material on general inspection, maintenance and repair can also be found in relevant Advisory Circular AC 43.13 from FAA.

Advisory
Circular

The Advisory Circular (AC) contains maintenance methods, techniques and practices.

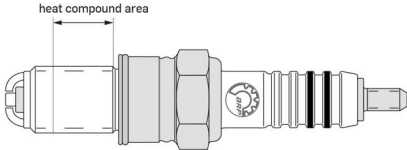
3.1) Installation-related information

- Secure aircraft against unauthorized operation.
- Disconnect negative terminal of aircraft battery.

New spar plugs:

NOTICE

- Restore aircraft to original operating configuration.
- Connect negative terminal of aircraft battery.

Step	Procedure
1	Apply a small amount of heat conduction compound to spark plug threads.  AE_2_0584

Step	Procedure
2	Tighten the spark plugs to 16 Nm (142 in. lb.) on a cold engine.
Pay attention to the specifications of the latest Installation Manual (IM) for the respective engine type! Spark plugs are already gapped upon delivery. No adjustment of the gap is necessary nor allowed.	

NOTICE

Mixing of spark plug types and spark plug connector types is NOT allowed. All spark plugs and spark plug connectors must be of the same part number for the entire engine.

New spark plug connectors:

Spark plug connectors now have a 90° angle, which have a slight influence on the outline of the engine shape and simplifies the measuring of pull-off force. See section 3.2.2.

3.2) Maintenance-related information

Points of inspection	Interval Operating hours	
	100 h	200 h
Remove the spark plugs, clean, check electrode gap. Replace as required.	x	
Replace spark plugs NOTE: MML's the interval for replacement is 400hrs if use MO-GAS and 200hrs if use AVGAS.	x*)	x
Check that the spark plug connectors fit tightly on the spark plugs. Minimum pull-off force is 30 N (7 lb).		x
*) Use of leaded fuel more than 30% of operation		

3.2.1) Inspection of spark plug gap measurement

Due to the curved gap between the center electrode and the ground electrodes, it is suggested to use a wire type feeler gauge for accurate gap measurement. See section 4 "Appendix", Fig. 1.

NOTICE

Adjustment of the spark plug gap is not allowed. If gap measurement is over permissible limit, the spark plug must be replaced.

Electrode gap	Code	Min.	Max.	Wear limit
	SP01	0.8 mm 0.031 in.	0.9 mm 0.035 in.	1.1 mm 0.043 in.

3.2.2) Spark plug connector pull-off force check

The spark plug connectors must fit tightly to ensure proper electrical connection. To check minimum pull-off force, attach a pull scale to the spark plug connector and pull perpendicular to the spark plug and observe the maximum force. Spark plug connectors that do not meet the minimum pull off force of 30 N (7 lb.) must be replaced.

3.3) Test run

Conduct test run including ignition check or lane check and leakage test. See chapter 12-20-00 of the latest Maintenance Manual Line (MML) for the respective engine type.

3.4) Summary

These instructions (section 3) have to be followed in accordance with the deadlines specified in section 1.5.

I A revision bar outside of the page margin indicates a change to text or graphic.

Translation into other languages might be performed in the course of language localization but does not lie within ROTAX® scope of responsibility.

In any case the original text in English language and the metric units are authoritative

3.5) Enquiries

Enquiries regarding this Service Instruction should be sent to the ROTAX® Authorized Distributor or their independent Service Center of your area.

A list of all ROTAX® Authorized Distributors or their independent Service Centers is provided on www.FLYROTAX.com.

4) Appendix

The following drawings should convey additional information:

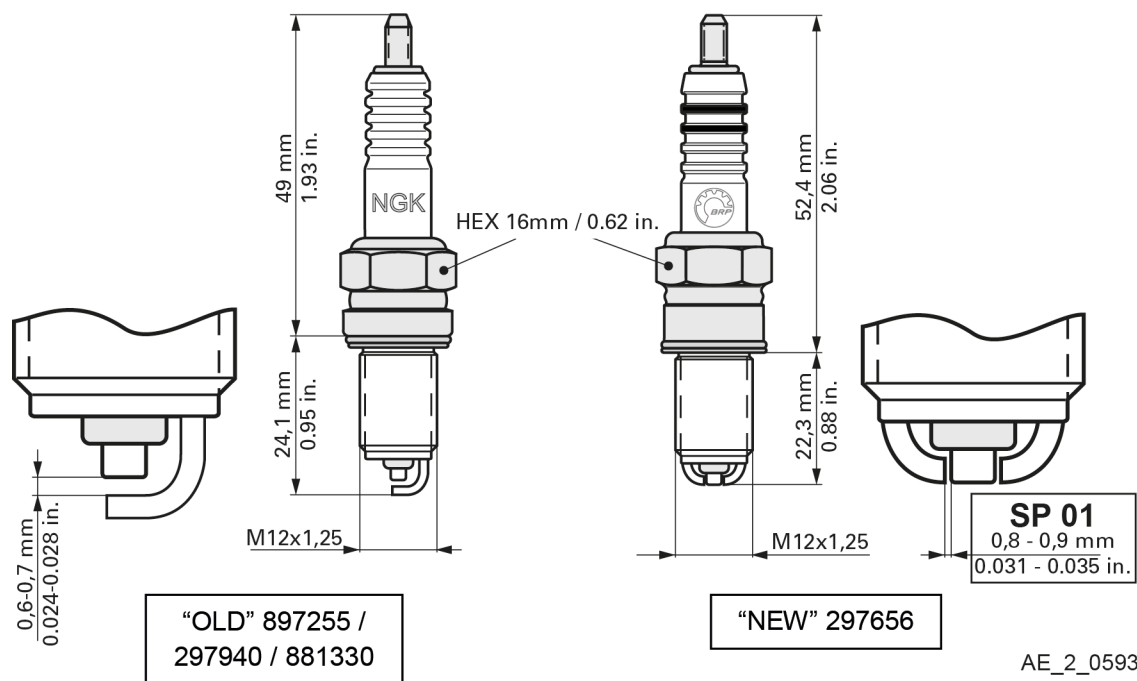


Fig. 1
Spark plug

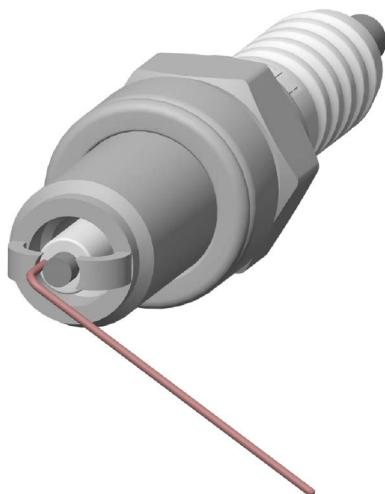


Fig. 2
Spark plug gap

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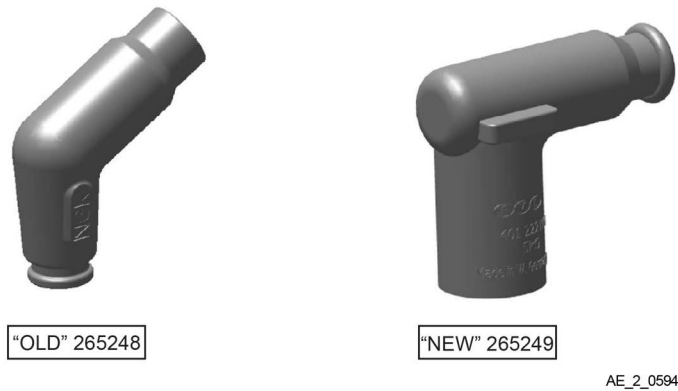


Fig. 3
Spark plug connector

Wire feeler gauge

Pull scale



Fig. 4
Special tooling

NOTE: The illustrations in this document show the typical construction. They may not represent full detail or the exact shape of the parts which have the same or similar function.

Exploded views are **not technical drawings** and are for reference only. For specific detail, refer to the current documents of the respective engine type.