

SERVICE INSTRUCTION

Introduction of wiring harness options with different lengths for ROTAX® Aircraft Engines Type 912 i (Series), 915 i (Series) and 916 i (Series)

ATA System: 76-50-00 Wiring Harness

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

All wiring harness of type:

Engine Series	Part no.	Description	Serial number
912 i Sport	665580	Wiring harness – Standard Packaged (contains 665578 + packaging)	all
	665582	Wiring harness – Short Packaged (contains 665573 + packaging)	all
	665584	Wiring harness – Special Packaged (contains 665574 + packaging)	all
	665581	Wiring harness – Standard (New style)* Packaged (contains 665621 + packaging)	all
	665583	Wiring harness – Short (New style)* Packaged (contains 665623 + packaging)	all
	665585	Wiring harness – Special (New style)* Packaged (contains 665622 + packaging)	all
915 i A	665586	Wiring harness – Standard Packaged (contains 665577 + packaging)	all
	665587	Wiring harness – Standard (New style)* Packaged (contains 665681 + packaging)	all
915 i C24	665599	Wiring harness – Short Packaged (contains 665597 + packaging)	all
	665594	Wiring harness – Short (New style)* Packaged (contains 665683 + packaging)	all
	665598	Wiring harness – Standard (New style)* Packaged (contains 665688 + packaging)	all

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Engine Series	Part no.	Description	Serial number
916 i A	665587	Wiring harness – Standard Packaged (contains 665681 + packaging)	all
916 i C24	665594	Wiring harness – Short (New style)* Packaged (contains 665683 + packaging)	all
	665598	Wiring harness – Standard (New style)* Packaged (contains 665688 + packaging)	all
916 iSc B	665588	Wiring harness – Standard Packaged (contains 665579 + packaging)	all
	665589	Wiring harness – Standard (New style)* Packaged (contains 665686 + packaging)	all

*New style wiring harness with Tyco connector for ignition coil. See section [1.13](#))

In case of doubt which wiring harness is in use in your relevant aircraft type or what maintenance steps to consider in case of an engine replacement, contact your aircraft manufacturer.

1.2) Concurrent ASB/SB/SI and SL

In addition to this Service Letter the following documents must be observed and complied with:

- In general, all relevant Alert Service Bulletins (ASB), Service Bulletins (SB), Service Instructions (SI), Service Letters (SL), Service Instruction - Parts and Accessories (SI-PAC) with relevance to perform this maintenance, repair or overhaul task.

1.3) Reason

In the course of continuous development, optional wiring harnesses with different lengths have been introduced. These wiring harness options allow more precise and convenient location of the ECU, fusebox and HIC connectors.

1.4) Subject

Introduction of wiring harness options with different lengths for ROTAX® Engine Types 912 i (Series), 915 i (Series) and 916 i (Series).

1.5) Compliance

NONE – For Information Only.

1.6) Approval

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

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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: No change

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, Installation Manual (IM) and in particular:
Chapters 76-00-00 & 77-00-00.
- In general, Illustrated Parts Catalog (IPC) and in particular:
Chapter 76-50-00.
- In general, Maintenance Manual Line (MML) and in particular:
Chapters 05-20-00 & 12-20-00.
- In general, Maintenance Manual Heavy (MMH) and in particular:
Chapters 76-50-00.
- In general, Operators Manual (OM)
- Aircraft's Pilot Operating Handbook (POH)

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 the one 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

In the course of continuous development and standardization, all new engines are manufactured using ignition coils with Tyco power connectors and wiring harnesses with Tyco plugs. They are marked in the wiring harness list with "New style". Wiring harnesses with Faston power connectors are available as spare parts while supplies last.

When ordering a replacement standard or optional length wiring harness, ensure compatibility with ignition coils. It may be necessary to replace ignition coils to match the chosen wiring harness.

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2) Material Information

2.1) Material

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

2.2) Company support information

- Any possible support by BRP-Rotax will be provided on request by ROTAX® Authorized Distributors or their independent Service Centers

2.3) Material requirement per engine

Parts requirements:

Engine Series	Fig. no.	Part no.	Qty / engine	Description	Application
912 i Sport*	1	665578	(1)	Wiring harness – Standard Packaged	Engine / ECU
	1	665573	(1)	Wiring harness (Optional) – Short Packaged	Engine / ECU
	1	665574	(1)	Wiring harness (Optional)– Special Packaged	Engine / ECU
	1	665621	(1)	Wiring harness – Standard (New style)* Packaged	Engine / ECU
	1	665623	(1)	Wiring harness (Optional)– Short (New style)* Packaged	Engine / ECU
	1	665622	(1)	Wiring harness (Optional) – Special (New style)* Packaged	Engine / ECU
* 912 iS Sport (Series) engines are no longer equipped with a knock sensor. Knock sensor deletion was introduced from engine serial numbers: 912 iS Sport – s/n 10002713 inclusive 912 iSc Sport – s/n 10002699 inclusive					
915 i A	1	665577	(1)	Wiring harness – Standard Packaged	
	1	665681	(1)	Wiring harness – Standard (New style)* Packaged	Engine / ECU
915 i C24	1	665597	(1)	Wiring harness (Optional) – Short Packaged	Engine / ECU
	1	665683	(1)	Wiring harness (Optional) – Short (New style)* Packaged	Engine / ECU
	1	665688	(1)	Wiring harness – Standard (New style)* Packaged	Engine / ECU

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Engine Series	Fig. no.	Part no.	Qty / engine	Description	Application
916 i A	1	665681	(1)	Wiring harness – Standard	Engine / ECU
916 i C24	1	665683	(1)	Wiring harness (Optional) – Short Packaged	Engine / ECU
	1	665688	(1)	Wiring harness – Standard Packaged	Engine / ECU
916 iSc B	1	665579	(1)	Wiring harness – Standard Packaged	Engine / ECU
	1	665686	(1)	Wiring harness – Standard (New style)* Packaged	Engine / ECU

*New style wiring harness with Tyco connector for ignition coil. See section [1.13](#)

NOTE: Wiring harness length can be chosen at time of order for delivery with a new engine or by purchasing as an individual spare part.

NOTE: See [Fig. 1](#) and [Fig. 2](#) for harness length details.

2.4) Material requirement per spare part

None.

2.5) Rework of parts

None.

2.6) Special tooling/lubricants- /adhesives- /sealing compounds

None.

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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.



All work must 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) Illustrated Parts Catalog – related information



See current Illustrated Parts Catalog (IPC) for the respective engine type, Chapter 76-50-00.

3.1.1) All wiring harnesses

In the course of continuous development and standardization, all new engines are manufactured using ignition coils with Tyco power connectors and wiring harnesses with Tyco plugs. Wiring harnesses with Faston power connectors are available as spare parts while supplies last.

When ordering a replacement standard or optional length wiring harness, ensure compatibility with ignition coils. It may be necessary to replace ignition coils to match the chosen wiring harness.

NOTE: Make sure to order the proper wiring harness according to your engine and aircraft configuration.

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3.1.2) 912 i (Series) wiring harnesses

Additional to the changes mentioned in section 3.1.1) the new 912 i (Series) engines are no longer equipped with a knock sensor. Knock sensor deletion was introduced from the following engine serial numbers:

Engine type	Serial number
912 iS Sport	10002713 inclusive
912 iSc Sport	10002699 inclusive

NOTE: The 912 iS Sport (Series) engine is not prone to detonation. The removal of the knock sensor has no effect on engine performance, ECU behaviour, redundancy, nor safety.

NOTE: In the event a new wiring harness installation on an older 912 iS Sport (Series) engine, the knock sensor must be removed.

NOTE: Make sure to order the proper wiring harness according to your aircraft configuration

3.2) Installation – related information



See current Installation Manual (IM) for the respective engine type, Chapter 76-00-00 & 77-00-00.

3.3) Maintenance (Line) – related information



See current Maintenance Manual Line (MML) for the respective engine type, Chapters 05-20-00 & 12-20-00.

Points of inspection	Interval Operating Hours		Chapter Reference
	25*	200	
Inspect the wiring (wiring harness) and its connections for secure fit, damage and signs of wear.	X	X	See relevant Maintenance Manual Line (MML) for the respective engine type and its periodical maintenance information.

3.4) Maintenance (Heavy) – related information



See current Maintenance Manual Heavy (MMH) for the respective engine type, Chapter 76-50-00

NOTE: As the wiring harness options are interchangeable it is also allowed to change e.g. from a standard wiring harness engine state to a shorter or longer one.

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3.5) Operation – related information



See current Operators Manual (OM) for the respective engine type.

3.6) Finishing Work

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

3.7) Test run

Conduct an engine test run.



See current Maintenance Manual Line (MML) for the respective engine type, Chapter 12-20-00.

3.8) Summary

These instructions (section 3) must be followed in accordance with the deadlines specified in section [1.5](#).

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.

3.9) Inquiries

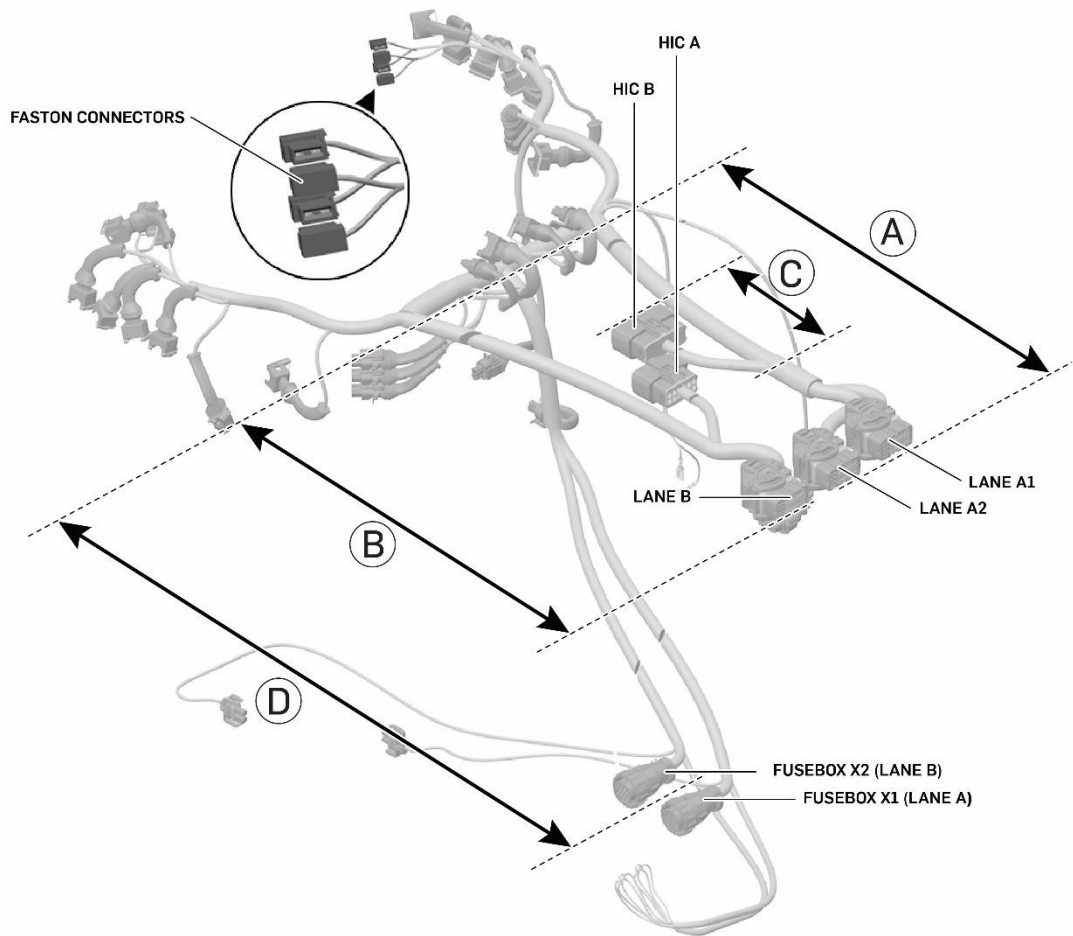
Inquiries regarding this Service Instruction should be sent to the ROTAX® Authorized Distributor of your area.

A list of all ROTAX® Authorized Distributors and their independent Service Centers is provided on <https://dealerlocator.flyrotax.com>.

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.

4) Appendix



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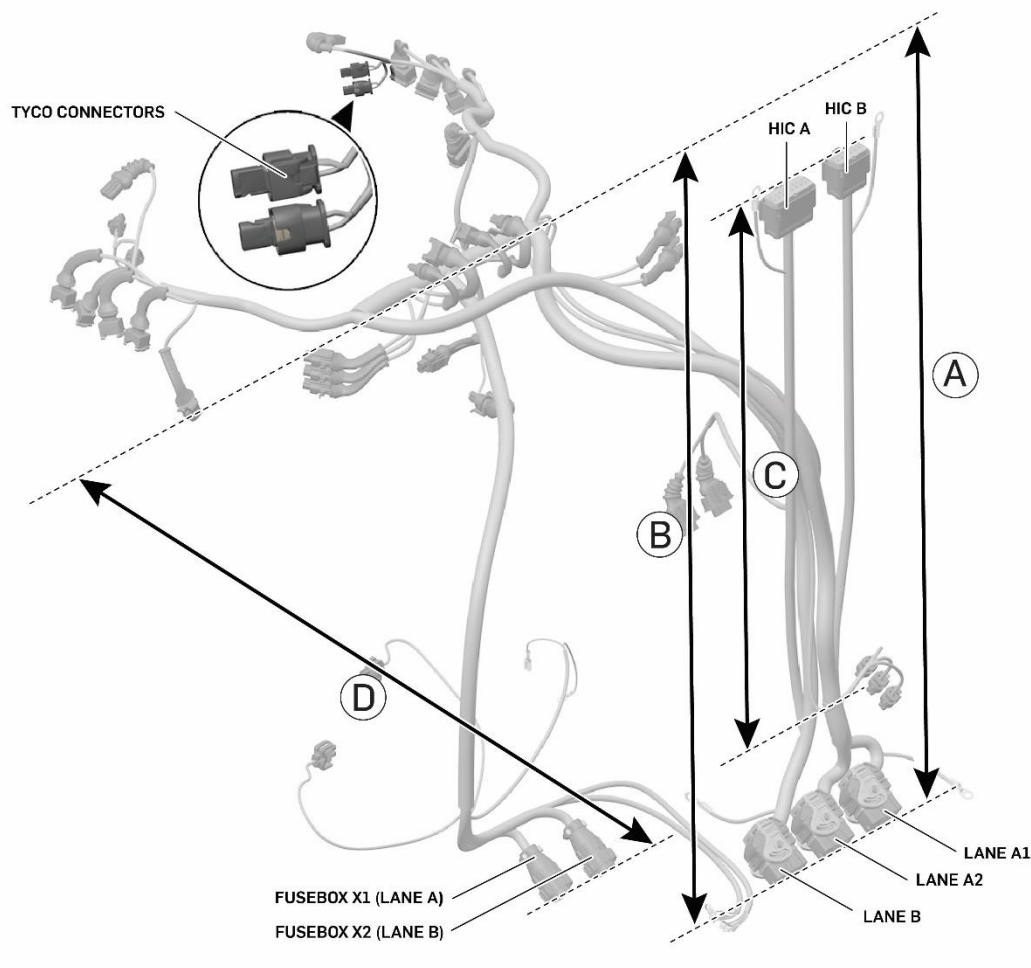
Fig. 1

See Fig. 1.

Example wiring harness with FASTON connectors

Engine Series	Harness Type	Part no.	Length "A" ECU Lane A1 & A2	Length "B" ECU Lane B	Length "C" HIC A & B	Length "D" Fusebox X1 & X2
912 i Sport	Standard	665578	1280 mm (50.4 in)	1280 mm (50.4 in)	400 mm (15.7 in)	580 mm (22.8 in)
	(Optional) Short	665573	600 mm (23.6 in)	650 mm (25.6 in)	400 mm (15.7 in)	580 mm (22.8 in)
	(Optional) Special	665574	1150 mm (45.3 in)	1200 mm (47.2 in)	400 mm (15.7 in)	580 mm (22.8 in)
	Standard (New style)*	665621	1280 mm (50.4 in)	1280 mm (50.4 in)	400 mm (15.7 in)	580 mm (22.8 in)
	(Optional) Short (New style)*	665623	730 mm (28.7 in.)	730 mm (28.7 in.)	400 mm (15.7 in)	580 mm (22.8 in)
	(Optional) Special (New style)*	665622	1280 mm (50.4 in)	1280 mm (50.4 in)	400 mm (15.7 in)	885 mm (34.8 in)

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Fig. 2
Example wiring harness with TYCO connectors

See Fig. 2.

Engine Series	Harness Type	Part no.	Length "A" ECU Lane A1 & A2	Length "B" ECU Lane B	Length "C" HIC A & B	Length "D" Fusebox X1 & X2
915 i A	Standard	665577	810 mm (31.9 in)	960 mm (37.8 in)	500 mm (19.7 in)	810 mm (31.9 in)
	Standard (New style)*	665681	810 mm (31.9 in)	960 mm (37.8 in)	500 mm (19.7 in)	810 mm (31.9 in)
915 i C24	(Optional) Short	665597	241 mm (9.5 in)	402 mm (15.8 in)	A = 34 mm (1.3 in) B = 60 mm (2.3 in)	242 mm (9.5 in)
	(Optional) Short (New style)*	665683	241 mm (9.5 in)	402 mm (15.8 in)	A = 34 mm (1.3 in) B = 60 mm (2.3 in)	242 mm (9.5 in)

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See [Fig. 2](#).

Engine Series	Harness Type	Part no.	Length "A" ECU Lane A1 & A2	Length "B" ECU Lane B	Length "C" HIC A & B	Length "D" Fusebox X1 & X2
915 i C24	Standard (New style)*	665688	960 mm (37.8 in)	1000 mm (39.4 in)	450 mm (17.7 in)	740 mm (29.1 in)
916 i A	Standard	665681	810 mm (31.9 in)	960 mm (37.8 in)	500 mm (19.7 in)	810 mm (31.9 in)
916 i C24	(Optional) Short (New style)*	665683	241 mm (9.5 in)	402 mm (15.8 in)	A = 34 mm (1.3 in) B = 60 mm (2.3 in)	242 mm (9.5 in)
	Standard (New style)*	665688	810 mm (31.9 in)	960 mm (37.8 in)	500 mm (19.7 in)	810 mm (31.9 in)
916 iSc B	Standard	665579	960 mm (37.8 in)	1000 mm (39.4 in)	450 mm (17.7 in)	740 mm (29.1 in)
	Standard (New style)*	665686	960 mm (37.8 in)	1000 mm (39.4 in)	450 mm (17.7 in)	740 mm (29.1 in)

*New style wiring harness with Tyco connector for ignition coil. See section [1.13](#)

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.

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