

Procedure SA 010 00004

Flight Design CT2k & CTSW
Fuel Pump Replacement Procedure

In support of Rotax Alert Service Bulletin ASB-912-053-E and ASB-912-053UL-E



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1 General Information

1.1 Subject

CT2K, CTSW.

1.2 Goal

This procedure defines the process to exchange the fuel pumps on the ROTAX® engines Type 912 (series) for CT2K and CTSW planes. This procedure supports the Rotax Alert Service Bulletin ASB-912-053-E, ASB-912-053UL-E with details regarding the CT specific engine installation.

1.3 Related documents

Rotax Alert Service Bulletin ASB-912-053-E, ASB-912-053UL-E.

1.4 Materials Required

Clamp	Art No. 7720
SEPCO Fire sleeve RL2274G-5/8"	Art No. 3189G
Silicone black fireproof	Art No. 3549 E

2 Procedure

WARNING! All operations in this procedure are to be performed in a well-ventilated compartment, away from heaters and flame.

2.1 Draining fuel

Pull the fuel valve in OFF position.

Prepare a container for drained fuel and position it under the gascolator throughout the complete installation process. Drain the fuel from gascolator by pressing the drain valve and locking it, turning it anticlockwise (Fig.1). Only the relative small amount of fuel in the engine compartment area will drain, as the fuel tanks are locked by the fuel valve.

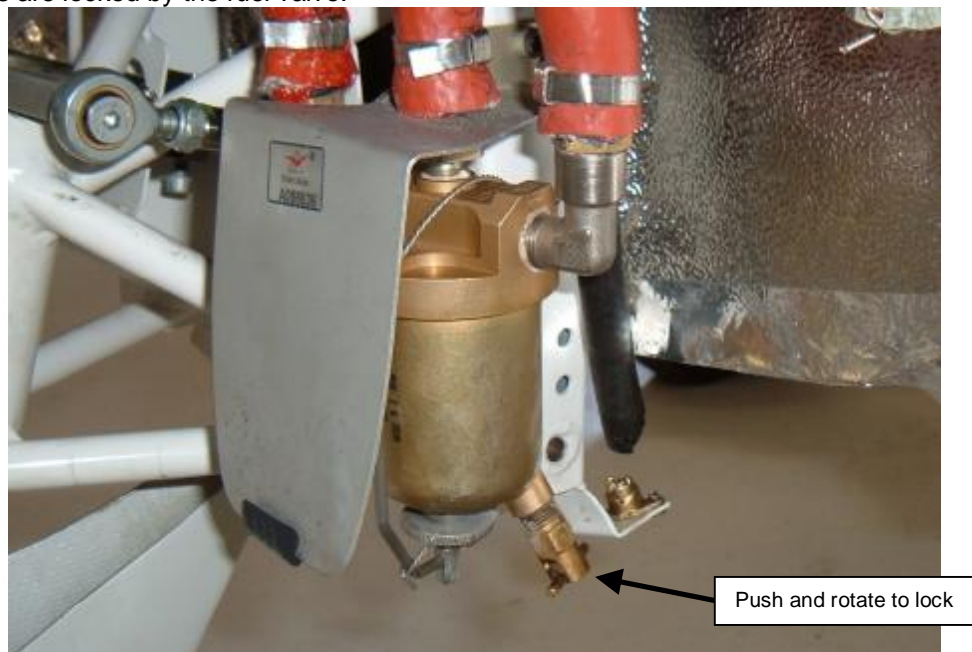


Fig.1

2.2 Preparing the supplied fuel pump for installation

The replacement fuel pump is delivered with two fuel lines attached. The length of the longer fuel line (feeding the pump) does not match the CT installation. Depending on your equipment, this fuel line is too short (Analog cockpit) and needs replacement by the line already installed to the plane, or it is too long (Dynon EMS installation with fuel flow sensor) and needs to be shortened. Both variants are described in the following.

If the plane is **not** equipped with Dynon EMS 120:

Disconnect the longer of the two lines from the supplied replacement fuel pump (Fig.2). To do so, carefully open the squeezed clamp and pull the fuel line off the connector.



Fig.2

If the plane *is* equipped with Dynon EMS 120:

Shorten the longer of the two fuel lines of the supplied replacement fuel pump to a length of approx. 230mm, measured as shown in Fig.3. Be very careful when cutting the line, that no debris can enter the opened fuel line.

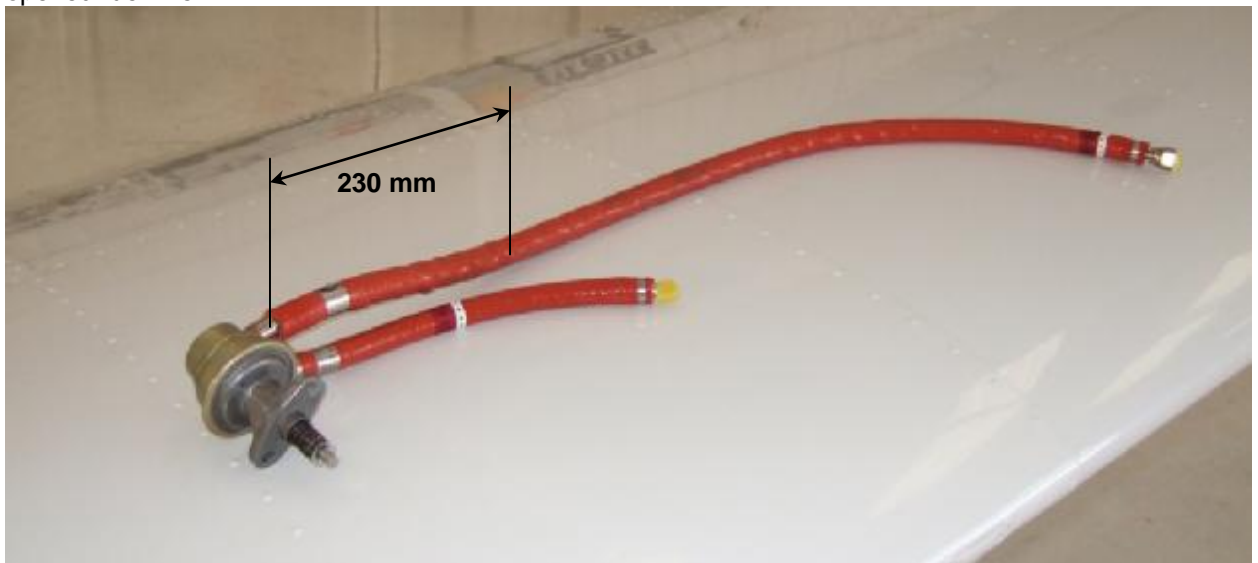


Fig.3

2.3 Fuel pump installation

For the fuel pump exchange procedure to the engine please follow the instructions from Rotax Alert Service Bulletin ASB-912-053-E and ASB-912-053UL-E.

For the installation of the firesleeve refer to the Firesleeve Assembly Instruction quoted in paragraph 2.5 of this instruction.

If the plane is **not** equipped with Dynon EMS-120:

Remove the longer line from the old fuel pump at the position 1 shown in Fig. 4. Remove fuel line from the connector at position 2 in Fig. 4.

Exchange fuel pump on engine following Rotax Alert Service Bulletin ASB-912-053-E and ASB-912-053UL-E.

Re- connect the fuel line to the new engine pump at the position, where the original fuel line was removed (position 1 in Fig. 4). First connect the inner fuel line with a clamp. After this is performed, connect the covering fire sleeve with a second clamp and seal the end of the firesleeve, as described in chapter 2.5 of this document.

Connect the remaining line of the replacement pump to the connector at position 2 in Fig. 4.

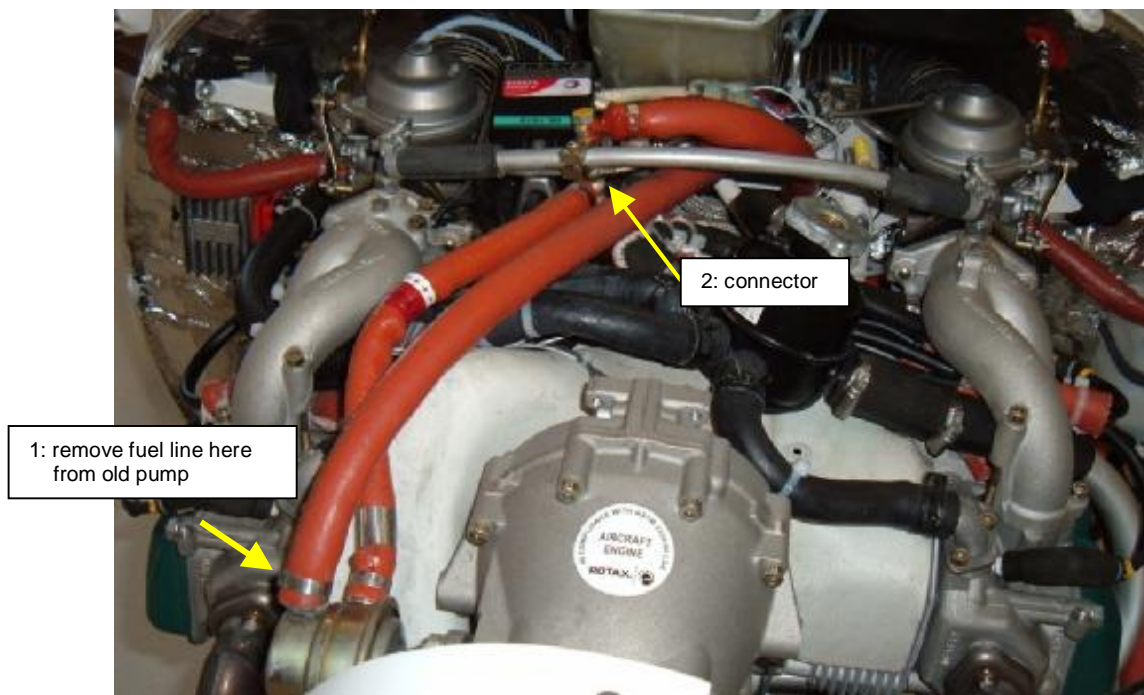


Fig.4

If the plane **is** equipped with Dynon EMS-120:

Remove the fuel lines of the old fuel pump at position 1 (pulsation damper) and position 2 (connector) as shown in Fig. 5.

Exchange fuel pump on engine following Rotax Alert Service Bulletin ASB-912-053-E and ASB-912-053UL-E.

Connect the shortened fuel line of the new engine pump to the pulsation damper at position 1 in Fig. 5.

First connect the inner fuel line with a clamp. After this is performed, connect the covering fire sleeve with a second clamp and seal the end of the firesleeve, as described in chapter 2.5 of this document.

Connect the second line of the replacement pump to the connector at position 2 in Fig. 5.

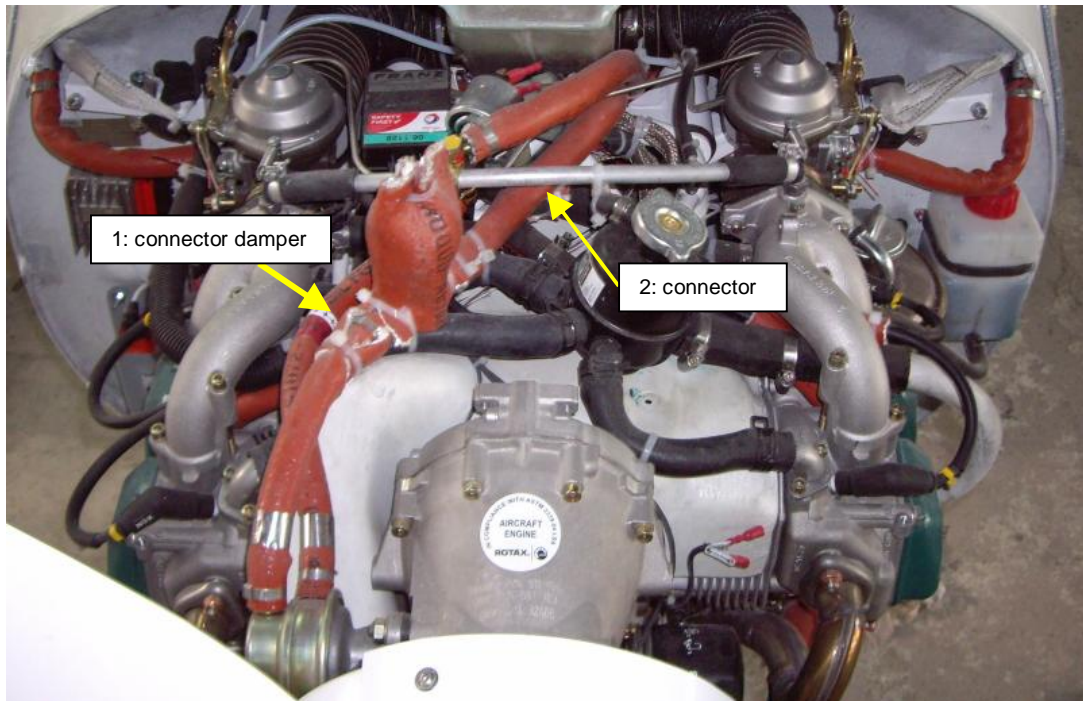


Fig.5

2.4 After installation

When the installation is completed, perform an engine test run for a short time. Then check carefully for fuel leakages at the changed connections and for oil leakages at the fuel pump flange to the engine. Be careful, the installed fire sleeve might make a small leak not easy viewable. If there are no leakages, the cowlings can be installed. Otherwise the clamps have to be re-tightened and the check repeated.

2.5 Firesleeve Assembly Instructions

FIRESLEEVE

Accessories



**3014260
FSC Clamp**
Used to attach firesleeve around socket on all size hose lines.

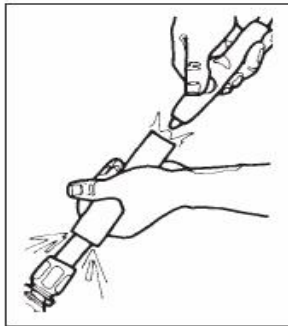


**3014261
FST Clamp Tool**
Used to secure FSC clamp.

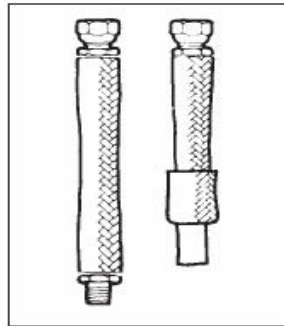


**3014262
FSS Firesleeve Sealant**
Keeps ends of firesleeve from fraying - for neater, longer lasting installation.

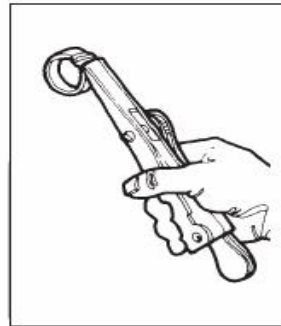
Firesleeve Assembly Instructions



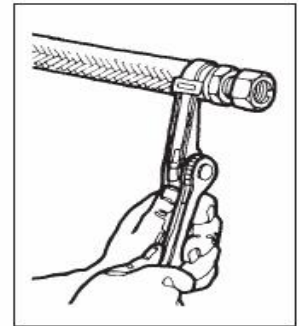
Step 1
Assemble one end fitting on hose. Cut firesleeve to same length as hose. Dip each end of firesleeve into FSS sealant approximately 1" and allow to dry.



Step 2
Push firesleeve back from cut end of hose and assemble the second end fitting. Then pull firesleeve completely over both sockets.



Step 3
Insert tail of FSC clamp into FST clamping tool.



Step 4
Position clamp around middle of socket and tighten with tool. Bend end of band back over buckle. Repeat on other end. Repair any scuffs or abrasions in firesleeve with FSS sealant.

3 Revisions

The Revisions pages are updated by Flight Design each time revision is issued. They contain a list of all revisions made to the current procedure since its original issue.

Revision No.	Date Released	Affected Chapters	Affected Pages	Approved By
Original Issue	03-Apr-07	N/A	N/A	