

AG-SB-2016-04-C-EN – Replacement Muffler Tube Cavalon and Calidus

Category C

EFFECTIVE DATE

17.05.2016

SUPERSEDES/REPLACES

N/A (initial issue)

APPLICABILITY

This Service Bulletin is applicable for all Cavalon and Calidus, engine type 914 UL, where the rivets are fitted at the hot end of the mufflers.

COMPLIANCE

To be performed with the next maintenance or at latest within the next 10 operating hours.

BACKGROUND

In few cases, high thermal load caused damage to the aluminium muffler tube.

RISK OF NEGLECT

Failure to comply with this instruction/information will result in:

- Vibration of the stick
- Loss of related warranty.

SCOPE OF WORK

- Replacement of the aluminium muffler tube with the stainless and heat-resistant steel muffler tube.

AFFECTED AREAS

N/A

SPECIAL TOOLS & CONSUMABLE MATERIALS

N/A

PARTS

78-20-00-S-42441 (L1) Conversion Kit muffler shell I

71-00-00-S-33478 (L1) Replacement kit wool aftersilencer

LABOR AND REQUIREMENTS

To accomplish 1 h

Task may only be performed by an organization or individual trained and entitled to do 'Line Maintenance'!

SUPPORT POLICY

Parts are free of charge

REFERENCES

Manufacturer Maintenance Manual (MMM) in latest revision.

DOCUMENTATION

The accomplishment of this Service Bulletin, or the decision of its rejection, must be properly documented, if such procedure is required by the relevant authority.

Warnings Caution and Notes

This instruction uses **WARNINGS**, **CAUTIONs** and **NOTEs** in bold italic letters to indicate especially critical and important instructions. The call-outs appear at the top of the Maintenance Job Card if of general nature or applicable for the complete task, or will directly precede the individual Work Step.

The meaning of each call-out is defined below:

WARNING: A warning means that the neglect of the appropriate procedure or condition could result in personal injury or fatal accidents.

CAUTION: A caution means that the neglect of the appropriate procedure or condition could result in damage to or destruction of equipment.

NOTE: A note stresses the attention for a special circumstance, which is essential to emphasize.

Category Codes

- A** Safety critical - failure to comply may result in a significant reduction of flight safety, injury or death
- B** Important - failure to comply may result in reduced safety margin, injury and/or equipment damage
- C** Beneficial - improves operating behaviour, reliability and/or maintainability

COMPLIANCE PROCEDURE

GENERAL, REFERENCES AND REQUIREMENTS

Task may only be performed by an organization or individual entitled and trained to do line maintenance.

Secure gyroplane against unauthorized or unintended operation.

Execute procedure only in cold engine condition.

Engine cowlings right must be removed, according to chapter 52-00-00 4-1.

SPECIAL TOOLS, CONSUMABLE MATERIALS AND PARTS

SP IMPORTANT NOTE: Procedure involves spare parts. Check parts list below for ordering details of affected components!

PRECAUTIONS AND SAFETY MEASURES

WARNING: Risk of severe burns and scalds! Hot engine parts! Always allow engine to cool down to ambient temperature before start any work!

WARNING: Wear eye protection when removing locking wire!

Caution: When replacing the muffler tube make sure to mark all parts so that every part is installed in exactly the same location and orientation!

PROCEDURES

Removal

- 1 Remove and dispose the locking wire of the hose clamps.
- 2 Loosen the hinge pin clamp (Fig.1).
- 3 Before replacing the muffler tube, mark the position so that the muffler tube can be exactly installed in the same location and orientation.
- 4 Remove the hose clamps and keep them for the installation procedure (Fig.2). Inspect the hose clamps for possible damage.
- 5 Remove and clamp muffler tube in bench vise carefully.
- 6 Use appropriate tools to drive out the riveting mandrels.
- 7 Drill out the rivet pin (Fig.3). Then, use appropriate tool to tap out the pin of the rivet.
- 8 Remove aluminium tube. If necessary cut it lengthwise.
- 9 Remove the rivet mandrel and rivet heads from the wool if it is left in place. Make sure any metal swarf is removed.
- 10 Check the wool. If it is visibly burnt, remove it completely and replace it with new one (Fig.4).

Installation

- 11 Remove the protection strip of steel tube.
- 12 Install the steel tube. Make sure that the rivets holes of muffler tube and the steel tube are perfectly lined up (Fig.5).
- 13 Insert the four rivets into the hole and install them with a rivet gun (Fig.5).
- 14 Set and fix the muffler tube into the correct position with hose clamps and hinge pin clamp, so that the muffler tube remains adjustable (Fig.6).

- 15 Fix the bottom cowling according to chapter 52-00-00 4-1. Make sure that the pipe of muffler tube is placed in the middle opening (surrounding 15 mm). If necessary, adjust the position of the muffler tube (Fig.7).
- 16 Remove the bottom cowling and tighten the two hose clamps and hinge pin clamp.
- 17 Secure the screws of hose clamps with locking wire (Fig.8).
- 18 Install the cowling according to chapter 52-00-00 4-1.

PARTS LIST

Fig.	Pos.	Description	PC PIT	Remark
		Conversion Kit Overflow muffler shell	L1 78-20-00-S-42441	
		Replacement kit wool aftersilencer	L1 71-00-00-S-33478	

ILLUSTRATIONS

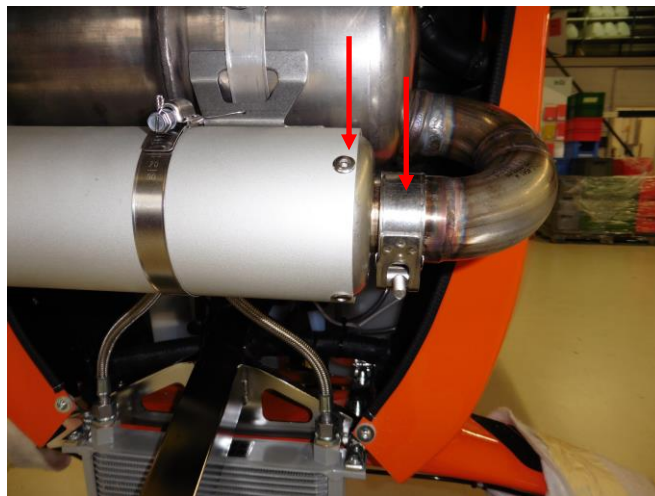


Fig.1 Rivets and hinge pin clamp

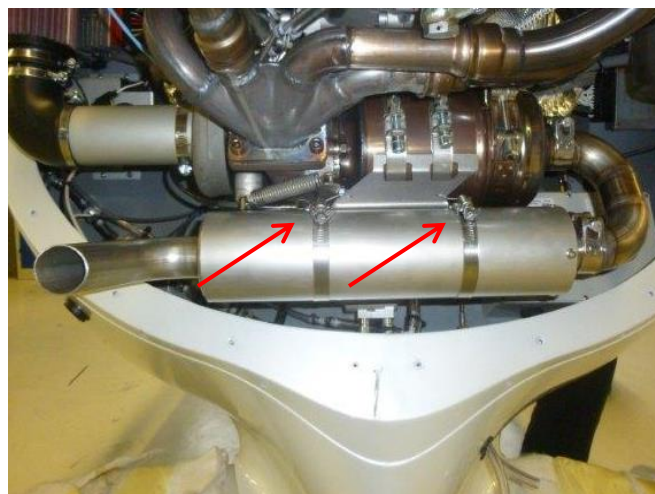


Fig.2: Hose clamps

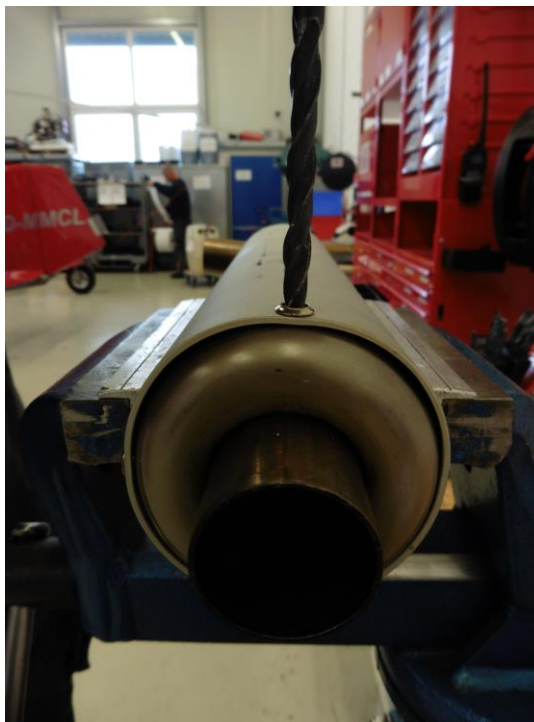


Fig.3: Drill out the rivet pin

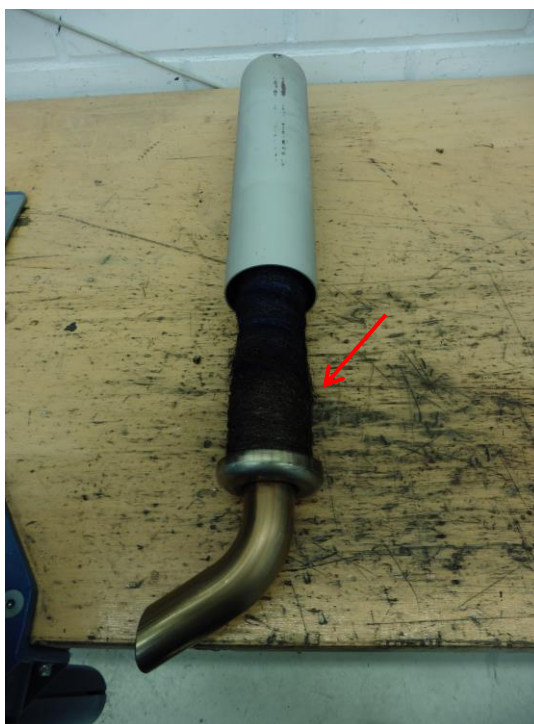


Fig.4: Wool

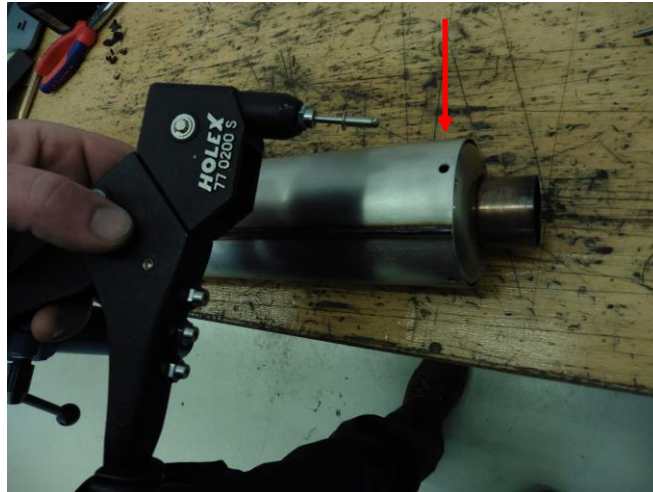


Fig.5: Riveting of steel tube

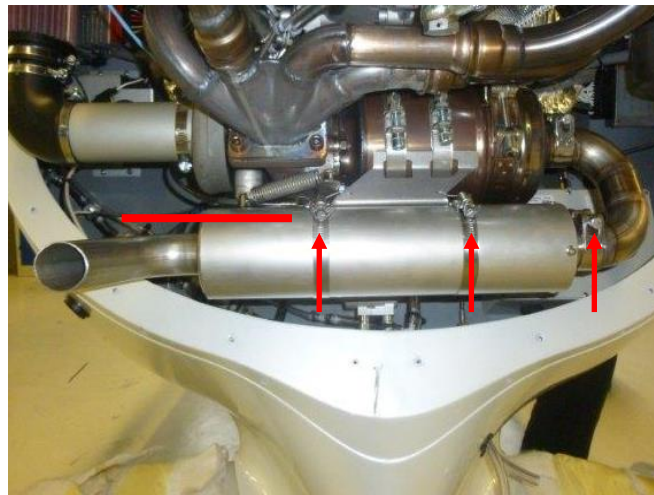


Fig.6: Installation of hose clamps and hinge pin clamp



Fig.7: Position of the muffler tube

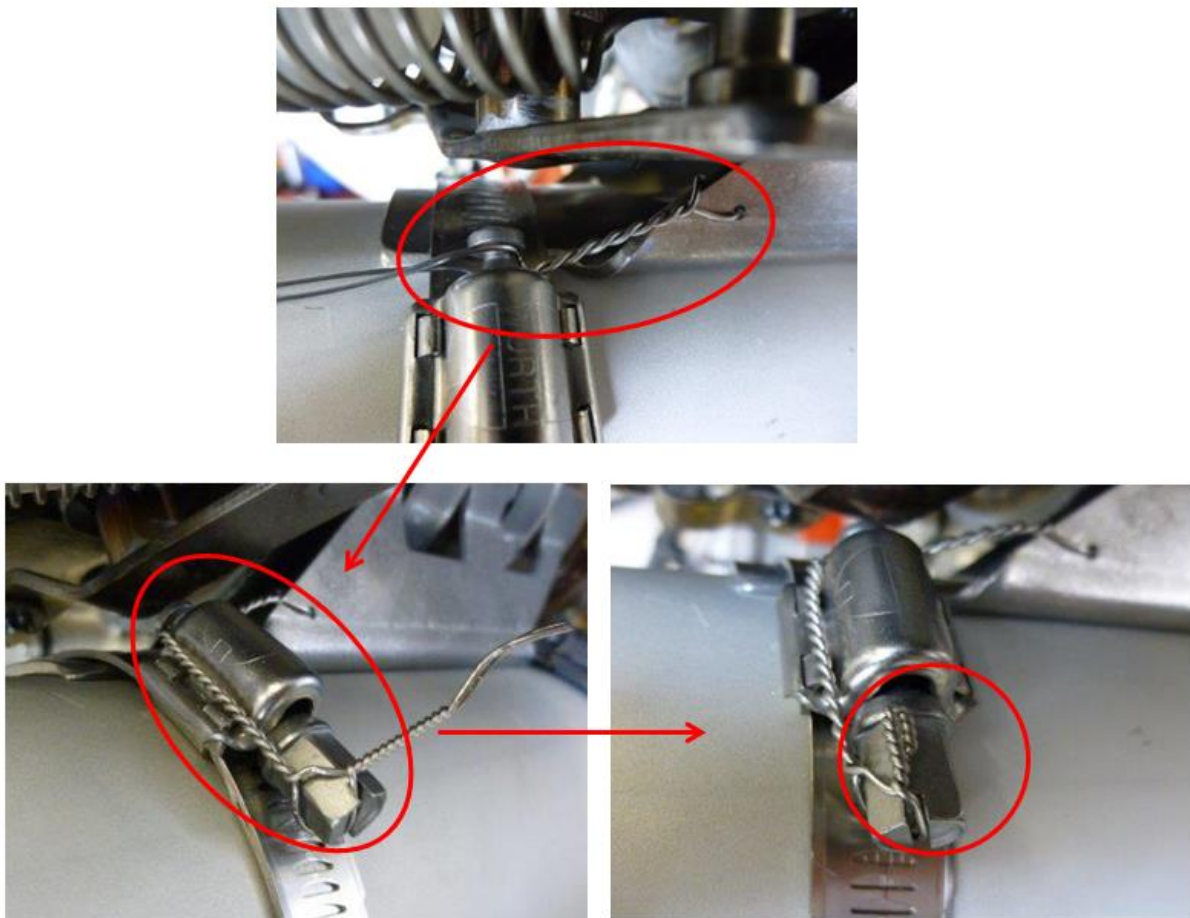


Fig.8: Installation of locking wire