

Thanakom Panyothin

From: McConnell, DAVE P <dave.p.mcconnell@lmco.com>
Sent: Thursday, November 1, 2018 9:04 AM
To: Grant Robinson
Cc: Thanakom Panyothin
Subject: S76D External Liferaft ICO Conflict

Grant

Response from CSE as per below.

Case Number: C0108603
Customer: Thai Aviation Services Limited
Aircraft S/N: 761000
Aircraft Model: S-76D
ATA: 25
Part Number: 650.2101 / 650.2102
Case Subject: Dart Life Raft-Request To Rationalize Inspection/Overhaul Intervals

Problem Description:

Reference

1) IC03940 Rev H External Life Raft

TAS Maintainers have discovered a conflict within the S76D External Life raft ICO IC03940 Rev. H Nov. 15/17 Chapter 5.

The life raft has an 18-month inspection that requires the unit be removed from the aircraft and be returned to the manufacturer or and approved service center per ICO 05-00-00 Section 1(E).

ICO 05-00-00 Section 1 (A) requires the life raft be removed and returned to the manufacturer for overhaul at 3 years from installation.

The problem becomes if planners take into account the first 18 months of service plus the 3 to 4 months it takes for the raft to be turned around and returned to TAS and then reinstalled onto the aircraft, the 3-year overhaul since install occurs 3 to 4 months before the next 18-month inspection requirement is due.

Additionally, at the 3-year interval the maintainer is directed by Chapter 05-00-00 Section 1 (G) to activate the life raft system and blow the rafts from the aircraft and then return both rafts plus the inflation bottle to the manufacturer.

In the above example, factoring in vendor turnaround time, the customer would be inflating rafts with 3 to 4 months life remaining.

A couple of additional scenarios are possible.

- 1) If the customer receives a raft that has previously been in service with another operator, the raft could potentially have been inspected at 18 months several times without being overhauled. This would depend on how the previous operator completed the removal information. If they removed the raft for an 18-month inspection instead of the 3-year overhaul, the repair facility could miss this fact and return rafts to the field that are overdue for the overhaul.
- 2) If customers track the 3-year overhaul, they do not know whether the install or the overhaul date would be set as the starting date. If it is the install date, as the raft is returned every 18 months, an

operator would never reach the 3-year interval and the raft would never be overhauled.

TAS recommend that the ICO text in Chapter 05-00-00 Section 1 (A) be changed to read "Overhaul: Each second 18-month inspection"

TAS request SA approval to modify their external life raft overhaul schedule to call for an overhaul at each second 18-month inspection. EoM

This email notification is provided as the case has been reviewed and does not contain technical data in the issue description.

Problem Resolution:

Sikorsky Service Engineering reviewed your request answers are as follow;

Issue 1. The problem becomes if planners take into account the first 18 months of service plus the 3 to 4 months it takes for the raft to be turned around and returned to TAS and then reinstalled onto the aircraft, the 3-year overhaul since install occurs 3 to 4 months before the next 18-month inspection requirement is due.

ANSWER - The raft pod is removed at 18 months and sent to vendor for inspection. If the customer receives the same pod back for their aircraft it is then re-installed on the aircraft – the calendar count down is now 18 months till the 36 month is due. The intention is not to count to transit and inspection time of the raft pod assembly back and forth from the vendor. When the vendor is complete with their scheduled inspection and the pod is returned, the 18 month calendar starts from the date it is re-installed. This should not be construed though to mean that if you remove the pod(s) from your aircraft for mission purposes or some other reason and they are set aside or stored for a period of time, that the calendar time stops – in this scenario, the calendar does not stop. But, because the item has been removed and returned to the vendor for a maintenance action to be completed – the next time interval will start with the re-installation of the unit on the aircraft. In addition – to account for some of this time lag, scheduling has the leeway to remove or extend the time by 10% (basically 2 months for the inspection and 4 months for the overhaul). This allows planners to schedule the removals and shipment time, etc.... to better align with aircraft schedules. In addition – if it is taking 3-4 months times for transit and return of the pods, then the customer should also consider the addition of spare pods to their inventory so that the aircraft mission is not interrupted / degraded during this time period

Issue 2. Additionally, at the 3-year interval the maintainer is directed by Chapter 05-00-00 Section 1 (G) to activate the life raft system and blow the rafts from the aircraft and then return both rafts plus the inflation bottle to the manufacturer. In the above example, factoring in vendor turnaround time, the customer would be inflating rafts with 3 to 4 months life remaining.

ANSWER - Same as above...

A couple of additional scenarios are possible.

1) If the customer receives a raft that has previously been in service with another operator, the raft could potentially have been inspected at 18 months several times without being overhauled. This would depend on how the previous operator completed the removal information. If they removed the raft for an 18-month inspection instead of the 3-year overhaul, the repair facility could miss this fact and return rafts to the field that are overdue for the overhaul.

ANSWER - The rafts and pods are returned to the vendor for these inspections and overhauls – they also track the serial numbers of the items to ensure that rafts being returned have the proper

maintenance (inspection / overhaul) accomplished prior to retuning them to the operators...

2) If customers track the 3-year overhaul, they do not know whether the install or the overhaul date would be set as the starting date. If it is the install date, as the raft is returned every 18 months, an operator would never reach the 3-year interval and the raft would never be overhauled.

ANSWER - Same as above – in addition – the operator should be tracking their scheduled inspection and overhaul schedules. The criteria for these units is the installation date – with the exception of the Life Raft Reservoir Assembly – it uses installation date for the 3 year overhaul schedule. The Hydrostatic Pressure Check at 5 years uses the date of manufacture (located on the Reservoir) for tracking the next due date...

TAS recommend that the ICO text in Chapter 05-00-00 Section 1 (A) be changed to read “Overhaul: Each second 18-month inspection”

ANSWER - At this time, no change to be made to the Maintenance Chart – possible exception – need to add the 15 Year inspection for replacement of the Life Raft Reservoir...

TAS request SA approval to modify their external life raft overhaul schedule to call for an overhaul at each second 18-month inspection.

ANSWER - At this time – Not Approved – schedule is correct as is...

INPUTS from Robert Murtha.

This email notification is provided as the case has been reviewed and does not contain technical data in the resolution.

David P. McConnell

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From: Grant Robinson <Grant_r@tasl.co.th>
Sent: Tuesday, October 30, 2018 15:17
To: McConnell, DAVE P (TH) <dave.p.mcconnell@lmco.com>
Cc: Thanakom Panyothin <thanakom_p@tasl.co.th>
Subject: EXTERNAL: RE: S76D External Liferaft ICO Conflict

Yes that approval would be helpful thx

Best Regards,

Grant Robinson
Repair Station Manager



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From: McConnell, DAVE P [mailto:dave.p.mcconnell@lmco.com]
Sent: Tuesday, October 30, 2018 3:03 PM
To: Grant Robinson
Cc: Thanakom Panyothin
Subject: RE: S76D External Liferaft ICO Conflict

Grant

Reading the below, it may be a bit hard to get a positive response from the factory as it simply suggests that the ICO wording be modified. As written it would almost have to be submitted as an Info rather than Action FTR.

Do you want me to specifically request that Sikorsky approve TAS going to an overhaul every other 18 months?

Dave

From: McConnell, DAVE P (TH)
Sent: Saturday, October 27, 2018 14:59
To: 'Grant Robinson' <Grant_r@tasl.co.th>
Cc: Thanakom Panyothin <thanakom_p@tasl.co.th>
Subject: RE: S76D External Liferaft ICO Conflict

Grant

So noted. I'll get a reading on this from the factory.

Dave

From: Grant Robinson <Grant_r@tasl.co.th>
Sent: Saturday, October 27, 2018 13:23
To: Mcconnell, DAVE P (TH) <dave.p.mcconnell@lmco.com>
Cc: Thanakom Panyothin <thanakom_p@tasl.co.th>
Subject: EXTERNAL: S76D External Liferaft ICO Conflict

Hello Dave

TAS Maintainers have discovered a conflict within the S76D External Life raft ICO #IC03940 Rev. H Nov. 15/17 Chapter 5.

The life raft has an 18 month inspection that requires the unit be removed from the aircraft and be returned to the manufacturer or and approved service center per ICO 05-00-00 Section 1(E). 05-00-00 Section 1 (A) requires the life raft be removed and returned to the manufacturer for overhaul at 3 years from installation. The problem is if we take into account the first 18 months of service plus the 3-4 months it takes to be returned to TAS and then reinstalled onto the aircraft, The 3 yr since install occurs 3-4 months before the next 18 month inspection requirement. Additionally, at the 3 year interval we are directed by chapter 5 to activate the life raft system and blow the rafts from the aircraft and return both rafts and the inflation bottle to the manufacturer. In the above example we would be inflating rafts with 3-4 months remaining.

A couple of additional scenarios are possible.

- 1) If we receive rafts that have previously been in service with another operator, the raft could potentially have been inspected at 18 months several times without being overhauled. This would depend on how the previous operator completed the removal information. If they removed the raft for an 18 month insp instead of the 3 year overhaul, the repair facility could miss this and return rafts to the field that are overdue for the overhaul.
- 2) If we track the 3 year overhaul, we do not know whether the install or the overhaul date would be set as the starting date. If it is the install date, as the raft is returned every 18 months, an operator would never reach the 3 year interval and the raft would never be overhauled.

TAS would like to request the ICO text in Chapter 05-00-00 Section 1 (A) be changed to read "Overhaul: Each second 18 month inspection"

Please contact me directly if you require any additional information. Thank you for your help.

Best Regards,

Grant Robinson
Repair Station Manager



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