

Set AFO or AFS status of FDIR
File: H_FCP_DHS_3058.xls
Author: S. Manganelli



Procedure Summary

Objectives

The ASW function "FDIR Management" is responsible of FDIR, mostly based on the On-Board Monitoring and Event-Action services.

FDIR management implements Cross-correlated checks (hard-coded functions) for more complicated checks, where a monitoring of a single parameter is not sufficient.

This procedure describes the steps needed to change the FDIR mode from AFS to AFO or vice versa.

The AFO mode is foreseen when the S/C is in Nominal mode while the AFS mode is foreseen in the others S/C modes.

Summary of Constraints

In AFO the CDMU ASW shall guarantee the continuation of the mission whenever level 0 to 2 alarm occurrences are detected; on detection of level 3 and level 4 alarms the ASW shall perform all necessary action to put the S/C in safety condition.

In AFS the CDMU ASW shall limit the fault isolation and recovery operations for level 0 to level 2 failures to a number of well identified cases (e.g. 1553 bus FDIR, 60-hours Ground outage and TCS FDIR). In this mode the S/C safety shall be considered more important than to the mission continuation.

Default status of the function: "Started".

When the function is stopped, it does not accept any other telecommands than the:

- Start Function TC(8,1,116);
- Report Function Status TC(8,5,116).

Thus, if the function is stopped this procedure cannot be executed.

Spacecraft Configuration

Start of Procedure

- CDMU in default configuration, that is:
- PM A or B ON (nominally A)
 - TM Encoder/OBT A or B active (nominally A)
 - RM A and B enabled
 - MM A and B ON

End of Procedure

- CDMU in default configuration, that is:
- PM A or B ON (nominally A)
 - TM Encoder/OBT A or B active (nominally A)
 - RM A and B enabled
 - MM A and B ON

Reference File(s)

Input Command Sequences

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Output Command Sequences

HFD3058A
 HFD3058B

Referenced Displays

ANDs **GRDs** **SLDs**
 ZAD08999
 ZAZAI999

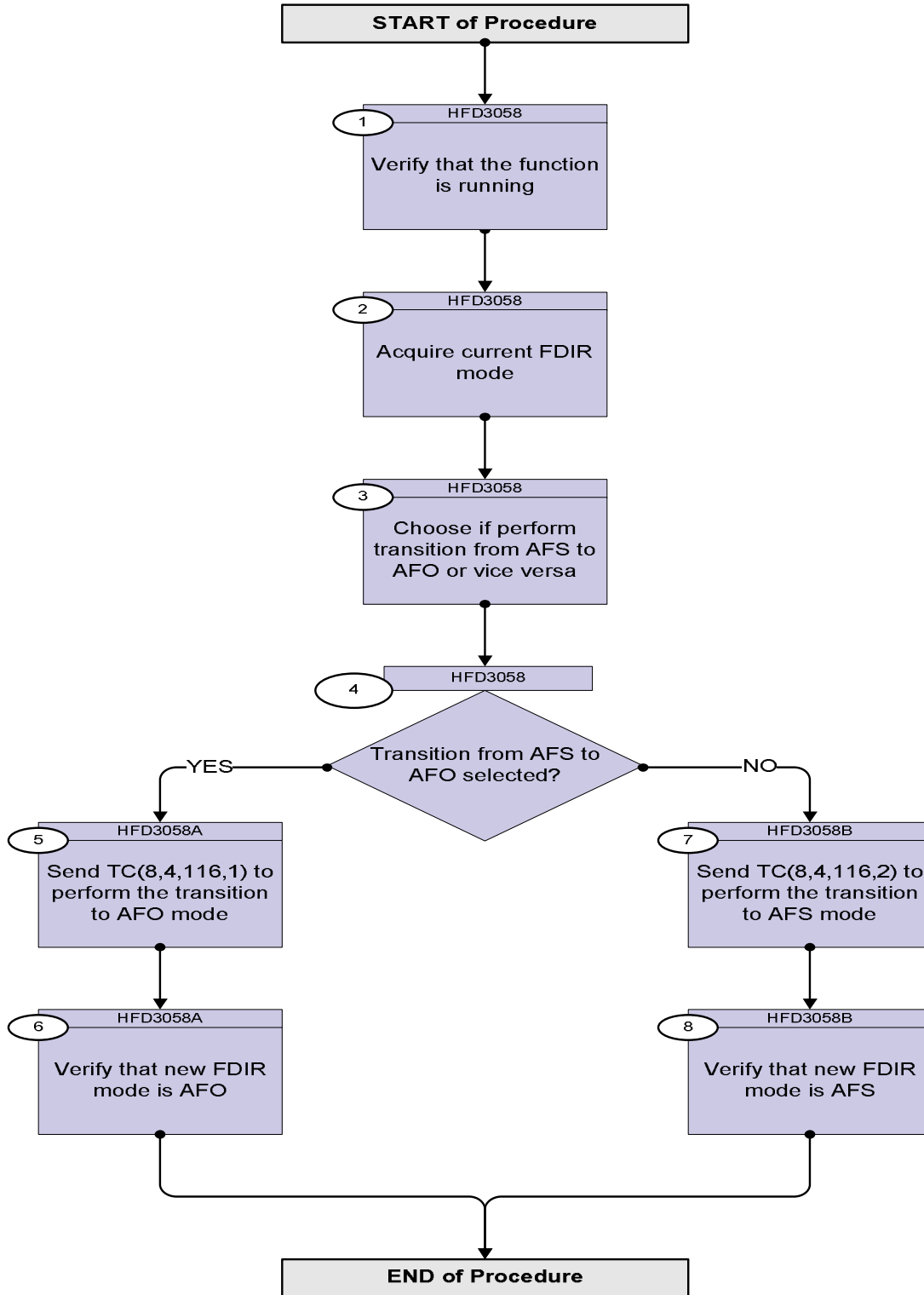
Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
06/11/07		1	Created	cmevi-hp	
10/06/08		2	TC Flag and Seq Properly changed	S. Manganelli	
26/06/08	1	3	DB check	S. Manganelli	
03/12/08	2	4	Updated following OBSW 3_6_2	S. Manganelli	

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Procedure Flowchart Overview



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
Beginning of Procedure				
HFD3058 Acquire FDIR mode				
SSID :				
1		Verify that the function is running		Next Step: 2
		Verify Telemetry FdirSts DEG23170	= Running	AND=ZAZAI999
2		Acquire current FDIR mode		Next Step: 3
		Verify Telemetry FdirMode DE81D170		AND=ZAZAI999
3		Choose if perform transition from AFS to AFO or vice versa		Next Step: 4
4		Transition from AFS to AFO selected?		Next Step: YES 5 NO 7
TC Seq. Name :HFD3058A (AFS to AFO)				
TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
5		Send TC(8,4,116,1) to perform the transition to AFO mode		Next Step: 6
		Execute Telecommand FdirToAfoMode TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 10 Det. descr. : FDIR Mode Change to AFO TC(8,4,116,1)	DC23L170	
6		Verify that new FDIR mode is AFO		Next Step: END
		Verify Telemetry FdirMode DE81D170	= AFO	AND=ZAZAI999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
<i>TC Seq. Name :HFD3058B (AFO to AFS)</i> <i>TimeTag Type:</i> <i>Sub Schedule ID:</i> <input type="checkbox"/>				
7		Send TC(8,4,116,2) to perform the transition to AFS mode		Next Step: 8
		Execute Telecommand <p style="text-align: right;">FdirToAfsMode</p> <i>TC Control Flags :</i> <p style="text-align: right;">GBM IL DSE --Y -- ---</p> <i>Subsch. ID : 10</i> <i>Det. descr. : FDIR Mode Change to AFS TC(8,4,116,2)</i>	DC24L170	
8		Verify that new FDIR mode is AFS		Next Step: END
		Verify Telemetry <p style="text-align: right;">FdirMode DE81D170</p> <p style="text-align: right;">= AFS</p>		AND=ZAZAI999
End of Procedure				