

STR FDIR Disable/Enable
File: H_FCP_AOC_DSTF.xls
Author: dsalt-hp



Procedure Summary

Objectives

The objective of this Herschel ACMS procedure is to Disable or Enable the FDIR checks related to the STR.

The procedure involves the following activities:

- identify STRmain & check its health
- disable selected STR related FDIR checks
- enable selected STR related FDIR checks

Summary of Constraints

Enabling of any STR FDIR checks must not be performed if the STRM is Unhealthy, as this will trigger an immediate reconfiguration.

Spacecraft Configuration

Start of Procedure

n/a

End of Procedure

n/a

Reference File(s)

Input Command Sequences

Output Command Sequences

HFADSTFX
HFADSTF1
HFADSTF2
HFADSTF3
HFADSTF4
HFADSTF5
HFADSTF6
HFADSTF7
HFADSTFA
HFADSTFB
HFADSTFC
HFADSTFD
HFADSTFE
HFADSTFF
HFADSTFG

Referenced Displays

ANDs	GRDs	SLDs
ZAA01999		
ZAA00999		
ZAA02999		
ZAA06999		

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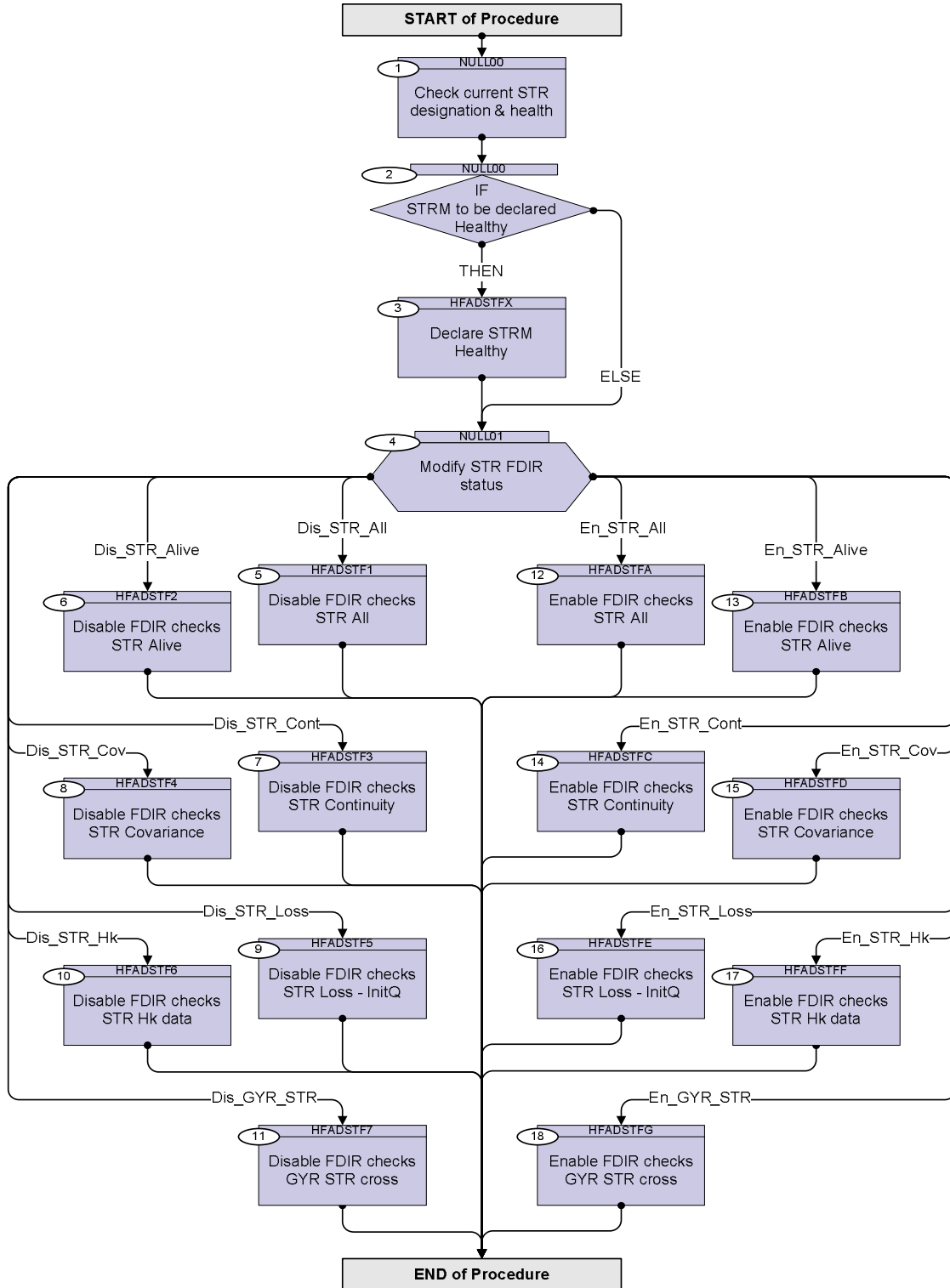
Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
10/02/2011		1	Created	dsalt-hp	
10/02/2011		2	Flowchart repositioned for printing	dsalt-hp	
11/02/2011	3.1	3	Step 2 added to declare STR healthy, if necessary	dsalt-hp	

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Procedure Flowchart Overview



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
Beginning of Procedure				
TC Seq. Name : NULL00 (Null Sequence 00)				
TimeTag Type: Sub Schedule ID: □				
1		Check current STR designation & health		Next Step: 2
1.1		Check STR in use (STRM)		□
		Verify Telemetry Curr STR in use AES18002	= STR 1 = STR 2	AND=ZAA01999
		If STR1 is Main, check the following		
		Verify Telemetry STR1 power AE4P1002	= ON	AND=ZAA00999
		Verify Telemetry STR2 power AE4P2002	= OFF	AND=ZAA00999
		If STR2 is Main, check the following		
		Verify Telemetry STR1 power AE4P1002	= OFF	AND=ZAA00999
		Verify Telemetry STR2 power AE4P2002	= ON	AND=ZAA00999
1.2		Check STRM health		□
		Check the Health flag of the current STRM via the following TM, as appropriate		
		Verify Telemetry STR1 Health Sts AES31002	<to be read>	AND=ZAA02999
		Verify Telemetry STR2 Health Sts AES32002	<to be read>	AND=ZAA02999
2		IF STRM to be declared Healthy		Next Step: THEN 3 ELSE 4

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
<p><i>TC Seq. Name : HFADSTFX (Declare STRM Healthy)</i></p> <p><i>TimeTag Type:</i> <i>Sub Schedule ID:</i></p> <p><input type="checkbox"/></p>				
3		Declare STRM Healthy		Next Step: 4
		<p>***** WARNING *****</p> <p>Enabling any STR FDIR check while STRM is Unhealthy will trigger an immediate reconfiguration.</p> <p>If both STRs are Unhealthy, the estimator will use GYR replacement mode and remain in SCM mode BUT will not execute any further pointings (SFP, LSC, RAS) until the replacement STR is declared Healthy</p>		
3.1		If STR1 is currently defined as STRM		<input type="checkbox"/>
		If STR1 is currently declared as Unhealthy but can now be declared Healthy, send the following TC		
		<p>Execute Telecommand</p> <p style="text-align: right;">STR1 healthy defSGM</p> <p>Command Parameter(s) :</p> <p style="padding-left: 40px;">UnHlthDF86 Cmd AHFH1001</p> <p style="padding-left: 40px;">UnHlth DD86Cmd AHFH2001</p> <p>TC Control Flags :</p> <p style="padding-left: 100px;">GBM IL DSE</p> <p style="padding-left: 100px;">--Y -- ---</p> <p>Subsch. ID : 20</p> <p>Det. descr. : TC(8,1) - STR1 healthy defSGM</p>	<p>ACYD0109</p> <p>Enable 86</p> <p>Enable 86</p>	
		<p>Verify Telemetry</p> <p style="text-align: right;">STR1 Health Sts AES31002</p>	= Healthy	AND=ZAA02999
3.2		If STR2 is currently defined as STRM		<input type="checkbox"/>
		If STR2 is currently declared as Unhealthy but can now be declared Healthy, send the following TC		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand <p style="text-align: center;">STR2 healthy defSGM</p> <i>Command Parameter(s) :</i> UnHlthDF86 Cmd AHFH1001 Enable 86 UnHlth DD86Cmd AHFH2001 Enable 86 <i>TC Control Flags :</i> <p style="text-align: right;">GBM IL DSE --Y -- ---</p> <i>Subsch. ID : 20</i> Det. descr. : TC(8,1) - STR2 healthy defSGM	ACYF4109	
		Verify Telemetry <p style="text-align: center;">STR2 Health Sts AES32002</p>	= Healthy	AND=ZAA02999
TC Seq. Name :NULL01 (Null Sequence 01) <i>TimeTag Type:</i> <i>Sub Schedule ID:</i> <input type="checkbox"/>				
4		Modify STR FDIR status		Next Step: Dis_STR_All 5 En_GYR_STR 18 Dis_STR_Alive 6 Dis_STR_Cont 7 Dis_STR_Cov 8 Dis_STR_Loss 9 Dis_STR_Hk 10 Dis_GYR_STR 11 En_STR_All 12 En_STR_Alive 13 En_STR_Cont 14 En_STR_Cov 15 En_STR_Loss 16 En_STR_Hk 17
TC Seq. Name :HFADSTF1 (Disable FDIR STR All) <i>TimeTag Type:</i> <i>Sub Schedule ID:</i> <input type="checkbox"/>				
5		Disable FDIR checks STR All		Next Step: END
5.1		Command disabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry <p style="text-align: center;">STR alive check AES47001</p>	= Enabled	AND=ZAA06999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand Fire Disable Check Command Parameter(s) : FireFun DF86Cmd AH8F1001 FireFun DD86Cmd AH8F2001 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,4) Fire Command - Fire Disable Check	ACZ7M109 Enable 86 Enable 86	
5.2		Verify disabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry STR alive check AES47001	= Disabled	AND=ZAA06999
		Verify Telemetry STR cont check AES48001	= Disabled	AND=ZAA06999
		Verify Telemetry STR covar check AES49001	= Disabled	AND=ZAA06999
		Verify Telemetry STR loss check AES4A001	= Disabled	AND=ZAA06999
		Verify Telemetry STR hk data chk AES4B001	= Disabled	AND=ZAA06999
		Verify Telemetry GYRSTR xchk AES57002	= Disabled	AND=ZAA06999
TC Seq. Name : HFADSTF2 (Disable FDIR STR Alive) TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
6		Disable FDIR checks STR Alive		Next Step: END
6.1		Command disabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry STR alive check AES47001	= Enabled	AND=ZAA06999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand DisChkSTR alive Command Parameter(s) : DisChk DF86Cmd AH8C1001 Enable 86 DisChk DD86Cmd AH8C2001 Enable 86 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,1) - Disable check FDIR - DisChkSTR alive	ACY6W109	
		Execute Telecommand Fire Disable Check Command Parameter(s) : FireFun DF86Cmd AH8F1001 Enable 86 FireFun DD86Cmd AH8F2001 Enable 86 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,4) Fire Command - Fire Disable Check	ACZ7M109	
6.2		Verify disabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry STR alive check AES47001 = Disabled		AND=ZAA06999
TC Seq. Name : HFADSTF3 (Disable FDIR STR Cont) TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
7		Disable FDIR checks STR Continuity		Next Step: END
7.1		Command disabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry STR cont check AES48001 = Enabled		AND=ZAA06999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand DisChkSTR continuity	ACY6X109	
		Command Parameter(s) : DisChk DF86Cmd AH8C1001 DisChk DD86Cmd AH8C2001	Enable 86 Enable 86	
		TC Control Flags : GBM IL DSE --Y -- --		
		Subsch. ID : 20 Det. descr. : TC(8,1) - Disable check FDIR - DisChkSTR continuity		
		Execute Telecommand Fire Disable Check	ACZ7M109	
		Command Parameter(s) : FireFun DF86Cmd AH8F1001 FireFun DD86Cmd AH8F2001	Enable 86 Enable 86	
		TC Control Flags : GBM IL DSE --Y -- --		
		Subsch. ID : 20 Det. descr. : TC(8,4) Fire Command - Fire Disable Check		
7.2		Verify disabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry STR cont check AES48001	= Disabled	AND=ZAA06999
TC Seq. Name : HFADSTF4 (Disable FDIR STR Cov) TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
8		Disable FDIR checks STR Covariance		Next Step: END
8.1		Command disabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry STR covar check AES49001	= Enabled	AND=ZAA06999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand DisChkSTR covariance	ACY6Y109	
		Command Parameter(s) : DisChk DF86Cmd AH8C1001 DisChk DD86Cmd AH8C2001	Enable 86 Enable 86	
		TC Control Flags : GBM IL DSE --Y -- --		
		Subsch. ID : 20 Det. descr. : TC(8,1) - Disable check FDIR - DisChkSTR covariance		
		Execute Telecommand Fire Disable Check	ACZ7M109	
		Command Parameter(s) : FireFun DF86Cmd AH8F1001 FireFun DD86Cmd AH8F2001	Enable 86 Enable 86	
		TC Control Flags : GBM IL DSE --Y -- --		
		Subsch. ID : 20 Det. descr. : TC(8,4) Fire Command - Fire Disable Check		
8.2		Verify disabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry STR covar check AES49001	= Disabled	AND=ZAA06999
TC Seq. Name : HFADSTF5 (Disable FDIR STR Loss) TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
9		Disable FDIR checks STR Loss - InitQ		Next Step: END
9.1		Command disabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry STR loss check AES4A001	= Enabled	AND=ZAA06999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand DisChkSTRlossStar-initQ	ACY6Z109	
		Command Parameter(s) : DisChk DF86Cmd AH8C1001 DisChk DD86Cmd AH8C2001	Enable 86 Enable 86	
		TC Control Flags : GBM IL DSE --Y -- --		
		Subsch. ID : 20 Det. descr. : TC(8,1) - Disable check FDIR - DisChkSTRlossStar-initQ		
		Execute Telecommand Fire Disable Check	ACZ7M109	
		Command Parameter(s) : FireFun DF86Cmd AH8F1001 FireFun DD86Cmd AH8F2001	Enable 86 Enable 86	
		TC Control Flags : GBM IL DSE --Y -- --		
		Subsch. ID : 20 Det. descr. : TC(8,4) Fire Command - Fire Disable Check		
9.2		Verify disabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry STR loss check AES4A001	= Disabled	AND=ZAA06999
TC Seq. Name :HFADSTF6 (Disable FDIR STR Hk) TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
10		Disable FDIR checks STR Hk data		Next Step: END
10.1		Command disabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry STR hk data chk AES4B001	= Enabled	AND=ZAA06999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand DisChkSTR hk data Command Parameter(s) : DisChk DF86Cmd AH8C1001 DisChk DD86Cmd AH8C2001 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,1) - Disable check FDIR - DisChkSTR hk data	ACY7A109 Enable 86 Enable 86	
		Execute Telecommand Fire Disable Check Command Parameter(s) : FireFun DF86Cmd AH8F1001 FireFun DD86Cmd AH8F2001 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,4) Fire Command - Fire Disable Check	ACZ7M109 Enable 86 Enable 86	
10.2		Verify disabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry STR hk data chk AES4B001	= Disabled	AND=ZAA06999
TC Seq. Name : HFADSTF7 (Disable FDIR GYR STR) TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
11		Disable FDIR checks GYR STR cross		Next Step: END
11.1		Command disabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry GYRSTR xchk AES57002	= Enabled	AND=ZAA06999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand DisChkGYR-STR cross	ACY8F109	
		Command Parameter(s) : DisChk DF86Cmd AH8C1001 DisChk DD86Cmd AH8C2001	Enable 86 Enable 86	
		TC Control Flags : GBM IL DSE --Y -- --		
		Subsch. ID : 20 Det. descr. : TC(8,1) - Disable check FDIR - DisChkGYR STR cross		
		Execute Telecommand Fire Disable Check	ACZ7M109	
		Command Parameter(s) : FireFun DF86Cmd AH8F1001 FireFun DD86Cmd AH8F2001	Enable 86 Enable 86	
		TC Control Flags : GBM IL DSE --Y -- --		
		Subsch. ID : 20 Det. descr. : TC(8,4) Fire Command - Fire Disable Check		
11.2		Verify disabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry GYRSTR xchk AES57002	= Disabled	AND=ZAA06999
TC Seq. Name : HFADSTFA (Enable FDIR STR All) TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
12		Enable FDIR checks STR All		Next Step: END
12.1		Command enabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry STR alive check AES47001	= Disabled	AND=ZAA06999
		Verify Telemetry STR cont check AES48001	= Disabled	AND=ZAA06999
		Verify Telemetry STR covar check AES49001	= Disabled	AND=ZAA06999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry STR loss check AES4A001	= Disabled	AND=ZAA06999
		Verify Telemetry STR hk data chk AES4B001	= Disabled	AND=ZAA06999
		Verify Telemetry GYRSTR xchk AES57002	= Disabled	AND=ZAA06999
		Execute Telecommand EnaChkSTR - all Command Parameter(s) : EnaChck DF86Cmd AH8F3001 EnaChck DD86Cmd AH8F4001 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,1) - Enable check FDIR - EnaChkSTR all	ACZBS109 Enable 86 Enable 86	
		Execute Telecommand EnaChkGYR-STR cross Command Parameter(s) : EnaChck DF86Cmd AH8F3001 EnaChck DD86Cmd AH8F4001 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,1) - Enable check FDIR - EnaChkGYR- STR cross	ACZDC109 Enable 86 Enable 86	
12.2		Verify disabling of STR related FDIR checks		□
		Verify Telemetry STR alive check AES47001	= Enabled	AND=ZAA06999
		Verify Telemetry STR cont check AES48001	= Enabled	AND=ZAA06999
		Verify Telemetry STR covar check AES49001	= Enabled	AND=ZAA06999
		Verify Telemetry STR loss check AES4A001	= Enabled	AND=ZAA06999
		Verify Telemetry STR hk data chk AES4B001	= Enabled	AND=ZAA06999
		Verify Telemetry GYRSTR xchk AES57002	= Enabled	AND=ZAA06999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
<p><i>TC Seq. Name :HFADSTFB (Enable FDIR STR Alive)</i></p> <p><i>TimeTag Type:</i> <i>Sub Schedule ID:</i></p> <p><input type="checkbox"/></p>				
13		Enable FDIR checks STR Alive		Next Step: END
13.1		Command enabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry STR alive check AES47001	= Disabled	AND=ZAA06999
		Execute Telecommand EnaChkSTR alive ACZBT109 Command Parameter(s) : EnaChck DF86Cmd AH8F3001 Enable 86 EnaChck DD86Cmd AH8F4001 Enable 86 TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 20 Det. descr. : TC(8,1) - Enable check FDIR - EnaChkSTR alive		
13.2		Verify disabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry STR alive check AES47001	= Enabled	AND=ZAA06999
<p><i>TC Seq. Name :HFADSTFC (Enable FDIR STR Cont)</i></p> <p><i>TimeTag Type:</i> <i>Sub Schedule ID:</i></p> <p><input type="checkbox"/></p>				
14		Enable FDIR checks STR Continuity		Next Step: END
14.1		Command enabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry STR cont check AES48001	= Disabled	AND=ZAA06999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand EnaChkSTR continuity Command Parameter(s) : EnaChck DF86Cmd AH8F3001 EnaChck DD86Cmd AH8F4001 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,1) - Enable check FDIR - EnaChkSTR continuity	ACZBU109 Enable 86 Enable 86	
14.2		Verify disabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry STR cont check AES48001	= Enabled	AND=ZAA06999
TC Seq. Name : HFADSTFD (Enable FDIR STR Cov) TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
15		Enable FDIR checks STR Covariance		Next Step: END
15.1		Command enabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry STR covar check AES49001	= Disabled	AND=ZAA06999
		Execute Telecommand EnaChkSTR covariance Command Parameter(s) : EnaChck DF86Cmd AH8F3001 EnaChck DD86Cmd AH8F4001 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,1) - Enable check FDIR - EnaChkSTR covariance	ACZBV109 Enable 86 Enable 86	
15.2		Verify disabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry STR covar check AES49001	= Enabled	AND=ZAA06999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand EnaChkSTR hk data Command Parameter(s) : EnaChck DF86Cmd AH8F3001 EnaChck DD86Cmd AH8F4001 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,1) - Enable check FDIR - EnaChkSTR hk data	ACZBX109 Enable 86 Enable 86	
17.2		Verify disabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry STR hk data chk AES4B001	= Enabled	AND=ZAA06999
TC Seq. Name : HFADSTFG (Enable FDIR GYR STR) TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
18		Enable FDIR checks GYR STR cross		Next Step: END
18.1		Command enabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry GYRSTR xchk AES57002	= Disabled	AND=ZAA06999
		Execute Telecommand EnaChkGYR-STR cross Command Parameter(s) : EnaChck DF86Cmd AH8F3001 EnaChck DD86Cmd AH8F4001 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,1) - Enable check FDIR - EnaChkGYR- STR cross	ACZDC109 Enable 86 Enable 86	
18.2		Verify disabling of STR related FDIR checks		<input type="checkbox"/>
		Verify Telemetry GYRSTR xchk AES57002	= Enabled	AND=ZAA06999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
End of Procedure				