

GYR health check
 File: H_FCP_AOC_5013.xls
 Author: dsalt-hp



Procedure Summary

Objectives

The objective of this Herschel ACMS procedure is to lists all activities necessary to assess the health and status of the GYR.

The procedure involves the following activities:

- check GYR-E health and status
- check each GYR health
- check resonator temperatures
- check GYR status

Summary of Constraints

n/a

Spacecraft Configuration

Start of Procedure

n/a

End of Procedure

n/a

Reference File(s)

Input Command Sequences

Output Command Sequences

Referenced Displays

ANDs	GRDs	SLDs
ZAA01999		
ZAA00999		
ZAA02999		
ZAA03999		
ZAA04999		

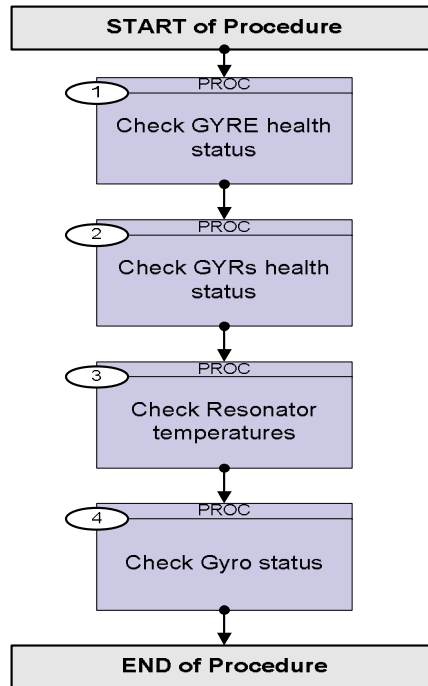
Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
03/08/08	1	1	Created	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				
PROC Procedure Properties				
SSID :				
1		Check GYRE health status		Next Step: 2
1.1		GYRE 1 in use and powered		<input type="checkbox"/>
		Verify Telemetry Curr GYRE use AES20002 = GYRE 1		AND=ZAA01999
		Verify Telemetry GYRE1 pwr conf AEGP1002 = Switch ON		AND=ZAA09999
1.2		Check GYRE 1 health status		<input type="checkbox"/>
		Verify Telemetry GYRE1 Hlth Sts AESK3002 = Healthy		AND=ZAA02999
		In case the status is set to "unavailable" wait 1 ETM cycle and check again.		
1.2.1		Unhealthy and in AFO?		<input type="checkbox"/>
		Verify Telemetry GYRE1 Hlth Sts AESK3002 = Unhealthy		AND=ZAA02999
		Verify Telemetry FdirMode AESMJ002 = AFO rcfg ena		AND=ZAA01999
1.2.2		Contingency		<input type="checkbox"/>
		Even though in AFO the reconfiguration did not take place as GYRE1 is still flagged as in use. A fallback to SASM should be considered.		
1.2.3		Unhealthy and in AFS?		<input type="checkbox"/>
		Verify Telemetry GYRE1 Hlth Sts AESK3002 = Unhealthy		AND=ZAA02999
		Verify Telemetry FdirMode AESMJ002 = AFS rfg dis		AND=ZAA01999
1.2.4		Contingency		<input type="checkbox"/>

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		If possible one should reconfigure the GYRE to use GYRE2.		
1.3		<i>GYRE 2 in use and powered</i>		<input type="checkbox"/>
		Verify Telemetry Curr GYRE use AES20002	= GYRE 2	AND=ZAA01999
		Verify Telemetry GYRE2 pwr conf AEGP2002	= Switch ON	AND=ZAA00999
1.4		<i>Check GYRE 2 health status</i>		<input type="checkbox"/>
		Verify Telemetry GYRE2 Hlth Sts AESK4002	= Healthy	AND=ZAA02999
		In case the status is set to "unavailable" wait 1 ETM cycle and check again.		
1.4.1		<i>Unhealthy and in AFO?</i>		<input type="checkbox"/>
		Verify Telemetry GYRE2 Hlth Sts AESK4002	= Unhealthy	AND=ZAA02999
		Verify Telemetry FdirMode AESMJ002	= AFO rcfg ena	AND=ZAA01999
1.4.2		<i>Contingency</i>		<input type="checkbox"/>
		Even though in AFO the reconfiguration did not take place as GYRE2 is still flagged as in use. A fallback to SASM should be considered.		
1.4.3		<i>Unhealthy and in AFS?</i>		<input type="checkbox"/>
		Verify Telemetry GYRE2 Hlth Sts AESK4002	= Unhealthy	AND=ZAA02999
		Verify Telemetry FdirMode AESMJ002	= AFS rfg dis	AND=ZAA01999
1.4.4		<i>Contingency</i>		<input type="checkbox"/>
		If possible one should reconfigure the GYRE to use GYRE1.		
2		<i>Check GYRs health status</i>		Next Step: 3

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
2.1		<i>GYR1 in use</i>		<input type="checkbox"/>
		Verify Telemetry Curr GYRs use AES19002	<> GYR 2-3-4	AND=ZAA01999
		This is the only configuration where GYR1 is not used.		
2.2		<i>Check GYR1 health status</i>		<input type="checkbox"/>
		Verify Telemetry GYR1 Health Sts AES41002	= Healthy	AND=ZAA02999
		In case the status is set to "unavailable" wait 1 ETM cycle and check again.		
2.2.1		<i>Unhealthy and in AFO?</i>		<input type="checkbox"/>
		Verify Telemetry GYR1 Health Sts AES41002	= Unhealthy	AND=ZAA02999
		Verify Telemetry FdirMode AESMJ002	= AFO rcfg ena	AND=ZAA01999
2.2.2		<i>Contingency</i>		<input type="checkbox"/>
		Even though in AFO the reconfiguration did not take place as GYR1 is still flagged as in use. A fallback to SASM should be considered.		
2.2.3		<i>Unhealthy and in AFS?</i>		<input type="checkbox"/>
		Verify Telemetry GYR1 Health Sts AES41002	= Unhealthy	AND=ZAA02999
		Verify Telemetry FdirMode AESMJ002	= AFS rfg dis	AND=ZAA01999
2.2.4		<i>Contingency</i>		<input type="checkbox"/>
		If possible one should reconfigure to use the fourth sensor not in the current configuration (if healthy) or if already 4 channels are selected remove GYR1 from the configuration in use.		
2.3		<i>GYR2 in use</i>		<input type="checkbox"/>

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry Curr GYRs use AES19002	<> GYR 1-3-4	AND=ZAA01999
		This is the only configuration where GYR2 is not used.		
2.4		Check GYR2 health status		<input type="checkbox"/>
		Verify Telemetry GYR2 Health Sts AES42002	= Healthy	AND=ZAA02999
		In case the status is set to "unavailable" wait 1 ETM cycle and check again.		
2.4.1		Unhealthy and in AFO?		<input type="checkbox"/>
		Verify Telemetry GYR2 Health Sts AES42002	= Unhealthy	AND=ZAA02999
		Verify Telemetry FdirMode AESMJ002	= AFO rcfg ena	AND=ZAA01999
2.4.2		Contingency		<input type="checkbox"/>
		Even though in AFO the reconfiguration did not take place as GYR2 is still flagged as in use. A fallback to SASM should be considered.		
2.4.3		Unhealthy and in AFS?		<input type="checkbox"/>
		Verify Telemetry GYR2 Health Sts AES42002	= Unhealthy	AND=ZAA02999
		Verify Telemetry FdirMode AESMJ002	= AFS rfg dis	AND=ZAA01999
2.4.4		Contingency		<input type="checkbox"/>
		If possible one should reconfigure to use the fourth sensor not in the current configuration (if healthy) or if already 4 channels are selected remove GYR2 from the configuration in use.		
2.5		GYR3 in use		<input type="checkbox"/>
		Verify Telemetry Curr GYRs use AES19002	<> GYR 1-2-4	AND=ZAA01999
		This is the only configuration where GYR3 is not used.		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
2.6		Check GYR3 health status		<input type="checkbox"/>
		Verify Telemetry GYR3 Health Sts AES43002	= Healthy	AND=ZAA02999
		In case the status is set to "unavailable" wait 1 ETM cycle and check again.		
2.6.1		Unhealthy and in AFO?		<input type="checkbox"/>
		Verify Telemetry GYR3 Health Sts AES43002	= Unhealthy	AND=ZAA02999
		Verify Telemetry FdirMode AESMJ002	= AFO rcfg ena	AND=ZAA01999
2.6.2		Contingency		<input type="checkbox"/>
		Even though in AFO the reconfiguration did not take place as GYR3 is still flagged as in use. A fallback to SASM should be considered.		
2.6.3		Unhealthy and in AFS?		<input type="checkbox"/>
		Verify Telemetry GYR3 Health Sts AES43002	= Unhealthy	AND=ZAA02999
		Verify Telemetry FdirMode AESMJ002	= AFS rfg dis	AND=ZAA01999
2.6.4		Contingency		<input type="checkbox"/>
		If possible one should reconfigure to use the fourth sensor not in the current configuration (if healthy) or if already 4 channels are selected remove GYR3 from the configuration in use.		
2.7		GYR4 in use		<input type="checkbox"/>
		Verify Telemetry Curr GYRs use AES19002	<> GYR 1-2-3	AND=ZAA01999
		This is the only configuration where GYR4 is not used.		
2.8		Check GYR4 health status		<input type="checkbox"/>

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry GYR4 Health Sts AES44002	= Healthy	AND=ZAA02999
		In case the status is set to "unavailable" wait 1 ETM cycle and check again.		
2.8.1		Unhealthy and in AFO?		<input type="checkbox"/>
		Verify Telemetry GYR4 Health Sts AES44002	= Unhealthy	AND=ZAA02999
		Verify Telemetry FdirMode AESMJ002	= AFO rcfg ena	AND=ZAA01999
2.8.2		Contingency		<input type="checkbox"/>
		Even though in AFO the reconfiguration did not take place as GYR4 is still flagged as in use. A fallback to SASM should be considered.		
2.8.3		Unhealthy and in AFS?		<input type="checkbox"/>
		Verify Telemetry GYR4 Health Sts AES44002	= Unhealthy	AND=ZAA02999
		Verify Telemetry FdirMode AESMJ002	= AFS rfg dis	AND=ZAA01999
2.8.4		Contingency		<input type="checkbox"/>
		If possible one should reconfigure to use the fourth sensor not in the current configuration (if healthy) or if already 4 channels are selected remove GYR4 from the configuration in use.		
3		Check Resonator temperatures		Next Step: 4
		To be performed for all healthy sensors channel		
3.1		GYR1 healthy?		<input type="checkbox"/>
		Verify Telemetry GYR1 Health Sts AES41002	= Healthy	AND=ZAA02999
3.2		Check GYR1 related Resonator Temperature		<input type="checkbox"/>

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry GYR A rsnrtemp AEGTA002	>= -20.0 degC <= 75.0 degC	AND=ZAA03999
3.3		GYR2 healthy?		<input type="checkbox"/>
		Verify Telemetry GYR2 Health Sts AES42002	= Healthy	AND=ZAA02999
3.4		Check GYR2 related Resonator Temperature		<input type="checkbox"/>
		Verify Telemetry GYR B rsnrtemp AEGTB002	>= -20.0 degC <= 75.0 degC	AND=ZAA03999
3.5		GYR3 healthy?		<input type="checkbox"/>
		Verify Telemetry GYR3 Health Sts AES43002	= Healthy	AND=ZAA02999
3.6		Check GYR3 related Resonator Temperature		<input type="checkbox"/>
		Verify Telemetry GYR C rsnrtemp AEGTC002	>= -20.0 degC <= 75.0 degC	AND=ZAA03999
3.7		GYR4 healthy?		<input type="checkbox"/>
		Verify Telemetry GYR4 Health Sts AES44002	= Healthy	AND=ZAA02999
3.8		Check GYR4 related Resonator Temperature		<input type="checkbox"/>
		Verify Telemetry GYR D rsnrtemp AEGTD002	>= -20.0 degC <= 75.0 degC	AND=ZAA04999
4		Check Gyro status		Next Step: END
		To be performed for all healthy sensors channel		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Note: The saturation status is not necessarily an unhealthy condition. It simply indicates that the Heater is working and the channel is warming up. Usually 2 out of 4 channels have DiodHeat sat & Heater Sat set to 'Saturated' while for the 2 other channels these are set to 'Not Saturated'. Two out of 4 heaters are nominally sufficient to keep the channels at a constant temperature of about 65°C. The anomaly is if the temperature is above 65°C and the DiodHeat sat & Heater Sat of the sensors are set to 'Saturated'.		
4.1		GYR1 healthy?		<input type="checkbox"/>
		Verify Telemetry GYR1 Health Sts AES41002	= Healthy	AND=ZAA02999
4.2		Check GYR1 status		<input type="checkbox"/>
		Refer to Checkform ZAA02999 at the back of this document (#734)		ANDCK
4.3		GYR2 healthy?		<input type="checkbox"/>
		Verify Telemetry GYR2 Health Sts AES42002	= Healthy	AND=ZAA02999
4.4		Check GYR2 status		<input type="checkbox"/>
		Refer to Checkform ZAA02999 at the back of this document (#735)		ANDCK
		Verify Telemetry GB quad loop c1 AEG8G002	= closed	AND=ZAA03999
4.5		GYR3 healthy?		<input type="checkbox"/>
		Verify Telemetry GYR3 Health Sts AES43002	= Healthy	AND=ZAA02999
4.6		Check GYR3 status		<input type="checkbox"/>
		Refer to Checkform ZAA03999 at the back of this document (#737)		ANDCK
4.7		GYR4 healthy?		<input type="checkbox"/>

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry GYR4 Health Sts AES44002	= Healthy	AND=ZAA02999
4.8		Check GYR4 status		<input type="checkbox"/>
		Refer to Checkform ZAA03999 at the back of this document (#738)		ANDCK
End of Procedure				

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ID	DESCRIPTION	VALUE	UNIT	ID	DESCRIPTION	VALUE	UNIT
AES32002	STR2 Health Sts	Healthy		AEG5U002	GA PhaseLock en	enabled	
AES33002	CRS1 Health Sts		AEG5V002	GA ampl ctrl en	enabled		
AES34002	CRS2 Health Sts		AEG5W002	GA quad ctrl en	enabled		
AES35002	Unused		AEG5X002	GA rate ctrl en	enabled		
AES40002	Hlth Sts word2		AEG5Y002	GA CL SF high	No HiRes mode		
AES41002	GYR1 Health Sts		AEG5Z002	GA DiodHeat sat	not saturated		
AES42002	GYR2 Health Sts		AEG60002	GA DiodHeat ON	heater ON		
AES43002	GYR3 Health Sts		AEG61002	GA GYR Heat ON	heater ON		
AES44002	GYR4 Health Sts		AEG62002	GA GYR Heat sat	not saturated		
AES45002	RWL1 Health Sts		AEG63002	GA RateDriveSat	not saturated		
AES46002	RWL2 Health Sts		AEG64002	GA start timeou	nominal		
AES47002	RWL3 Health Sts		AEG65002	GA edit NdCos	not edit NdCos		
AES48002	RWL4 Health Sts		AEG66002	GA param drive	turned on		
AESK0002	Hlth Sts word3		AEG67002	GA PLL enabled	turned on		
AESK1002	RCSA Health Sts		AEG68002	GA rate loop cl	closed		
AESK2002	RCSB Health Sts		AEG69002	GA quad loop cl	closed		
AESK3002	GYRE1 Hlth Sts		AEG80002	GYR B Statwrđ 1			
AESK4002	GYRE2 Hlth Sts		AEG81002	GB PhaseLock en			
AESK5002	SAS1N Hlth Sts		AEG82002	GB ampl ctrl en			
AESK6002	SAS1R Hlth Sts		AEG83002	GB quad ctrl en			
AESK7002	SAS2N Hlth Sts		AEG84002	GB rate ctrl en			
AESK8002	SAS2R Hlth Sts		AEG85002	GB CL SF high			
AERRA001	CRS1 rate com X		AEG86002	GB DiodHeat sat			
AERRB001	CRS1 rate com Y		AEG87002	GB DiodHeat ON			
AERRC001	CRS1 rate com Z		AEG88002	GB GYR Heat ON			
AERRD001	CRS2 rate com X		AEG89002	GB GYR Heat sat			
AERRE001	CRS2 rate com Y		AEG8A002	GB RateDriveSat			
AERRF001	CRS2 rate com Z		AEG8B002	GB start timeou			
AERTD001	CRSm raw hous T		AEG8C002	GB edit NdCos			
AMRT1034	CRS-1 Temp		AEG8D002	GB param drive			
AMRT2035	CRS-2 Temp		AEG8E002	GB PLL enabled			
AEG5T002	GYR A Statwrđ 1		AEG8F002	GB rate loop cl			

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ID	DESCRIPTION	VALUE	UNIT	ID	DESCRIPTION	VALUE	UNIT
AES32002	STR2 Health Sts			AEG5U002	GA PhaseLock en		
AES33002	CRS1 Health Sts			AEG5V002	GA ampl ctrl en		
AES34002	CRS2 Health Sts			AEG5W002	GA quad ctrl en		
AES35002	Unused			AEG5X002	GA rate ctrl en		
AES40002	Hlth Sts word2			AEG5Y002	GA CL SF high		
AES41002	GYR1 Health Sts			AEG5Z002	GA DiodHeat sat		
AES42002	GYR2 Health Sts	Healthy		AEG60002	GA DiodHeat ON		
AES43002	GYR3 Health Sts			AEG61002	GA GYR Heat ON		
AES44002	GYR4 Health Sts			AEG62002	GA GYR Heat sat		
AES45002	RWL1 Health Sts			AEG63002	GA RateDriveSat		
AES46002	RWL2 Health Sts			AEG64002	GA start timeou		
AES47002	RWL3 Health Sts			AEG65002	GA edit NdCos		
AES48002	RWL4 Health Sts			AEG66002	GA param drive		
AESK0002	Hlth Sts word3			AEG67002	GA PLL enabled		
AESK1002	RCSA Health Sts			AEG68002	GA rate loop cl		
AESK2002	RCSB Health Sts			AEG69002	GA quad loop cl		
AESK3002	GYRE1 Hlth Sts			AEG80002	GYR B Statwrld 1		
AESK4002	GYRE2 Hlth Sts			AEG81002	GB PhaseLock en	enabled	
AESK5002	SAS1N Hlth Sts			AEG82002	GB ampl ctrl en	enabled	
AESK6002	SAS1R Hlth Sts			AEG83002	GB quad ctrl en	enabled	
AESK7002	SAS2N Hlth Sts			AEG84002	GB rate ctrl en	enabled	
AESK8002	SAS2R Hlth Sts			AEG85002	GB CL SF high	No HiRes mode	
AERRA001	CRS1 rate com X			AEG86002	GB DiodHeat sat	not saturated	
AERRB001	CRS1 rate com Y			AEG87002	GB DiodHeat ON	heater ON	
AERRC001	CRS1 rate com Z			AEG88002	GB GYR Heat ON	heater ON	
AERRD001	CRS2 rate com X			AEG89002	GB GYR Heat sat	not saturated	
AERRE001	CRS2 rate com Y			AEG8A002	GB RateDriveSat	not saturated	
AERRF001	CRS2 rate com Z			AEG8B002	GB start timeou	nominal	
AERTD001	CRSm raw hous T			AEG8C002	GB edit NdCos	not edit NdCos	
AMRT1034	CRS-1 Temp			AEG8D002	GB param drive	turned on	
AMRT2035	CRS-2 Temp			AEG8E002	GB PLL enabled	turned on	
AEG5T002	GYR A Statwrld 1			AEG8F002	GB rate loop cl	closed	

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ID	DESCRIPTION	VALUE	UNIT	ID	DESCRIPTION	VALUE	UNIT
AEG8G002	GB quad loop cl			AEGCV002	GD PLL enabled		
AEGA7002	GYR C Statwrd 1			AEGCW002	GD rate loop cl		
AEGA8002	GC PhaseLock en	enabled		AEGCX002	GD quad loop cl		
AEGA9002	GC ampl ctrl en	enabled		AEG6A002	GA Status LSW		
AEGAA002	GC quad ctrl en	enabled		AEG6B002	GA ampl loop cl		
AEGAB002	GC rate ctrl en	enabled		AEGSE002	GYR AB Statw 2		
AEGAC002	GC CL SF high	No HiRes mode		AEG6C002	GA phas err low		
AEGAD002	GC DiodHeat sat	saturated		AEG6D002	GA High Gain ON		
AEGAE002	GC DiodHeat ON	heater ON		AEG6E002	fixed 0		
AEGAF002	GC GYR Heat ON	heater ON		AEG6F002	GA GYR state		
AEGAG002	GC GYR Heat sat	not saturated		AEG8H002	GB Status LSW		
AEGAH002	GC RateDriveSat	not saturated		AEG8J002	GB ampl loop cl		
AEGAJ002	GC start timeou	nominal		AEG8K002	GB phas err low		
AEGAK002	GC edit NdCos	not edit NdCos		AEG8L002	GB High Gain ON		
AEGAL002	GC param drive	turned on		AEG8M002	fixed 0		
AEGAM002	GC PLL enabled	turned on		AEG8N002	GB GYR state		
AEGAN002	GC rate loop cl	closed		AEGAR002	GC Status LSW		
AEGAP002	GC quad loop cl	closed		AEGAS002	GC ampl loop cl		
AEGCE002	GYR D Statwrd 1			AEGSF002	GYR CD Statw 2		
AEGCF002	GD PhaseLock en			AEGAT002	GC phas err low		
AEGCG002	GD ampl ctrl en			AEGAU002	GC High Gain ON		
AEGCH002	GD quad ctrl en			AEGAV002	fixed 0		
AEGCJ002	GD rate ctrl en			AEGAW002	GC GYR state		
AEGCK002	GD CL SF high			AEGCY002	GD Status LSW		
AEGCL002	GD DiodHeat sat			AEGCZ002	GD ampl loop cl		
AEGCM002	GD DiodHeat ON			AEGD0002	GD phas err low		
AEGCN002	GD GYR Heat ON			AEGD1002	GD High Gain ON		
AEGCP002	GD GYR Heat sat			AEGD2002	fixed 0		
AEGCR002	GD RateDriveSat			AEGD3002	GD GYR state		
AEGCS002	GD start timeou			AEGTA002	GYR A rsnrtemp		
AEGCT002	GD edit NdCos			AEGTB002	GYR B rsnrtemp		
AEGCU002	GD param drive			AEGTC002	GYR C rsnrtemp		

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ID	DESCRIPTION	VALUE	UNIT	ID	DESCRIPTION	VALUE	UNIT
AEG8G002	GB quad loop cl			AEGCV002	GD PLL enabled	turned on	
AEGA7002	GYR C Statwrd 1			AEGCW002	GD rate loop cl	closed	
AEGA8002	GC PhaseLock en			AEGCX002	GD quad loop cl	closed	
AEGA9002	GC ampl ctrl en			AEG6A002	GA Status LSW		
AEGAA002	GC quad ctrl en			AEG6B002	GA ampl loop cl		
AEGAB002	GC rate ctrl en			AEGSE002	GYR AB Statw 2		
AEGAC002	GC CL SF high			AEG6C002	GA phas err low		
AEGAD002	GC DiodHeat sat			AEG6D002	GA High Gain ON		
AEGAE002	GC DiodHeat ON			AEG6E002	fixed 0		
AEGAF002	GC GYR Heat ON			AEG6F002	GA GYR state		
AEGAG002	GC GYR Heat sat			AEG8H002	GB Status LSW		
AEGAH002	GC RateDriveSat			AEG8J002	GB ampl loop cl		
AEGAJ002	GC start timeou			AEG8K002	GB phas err low		
AEGAK002	GC edit NdCos			AEG8L002	GB High Gain ON		
AEGAL002	GC param drive			AEG8M002	fixed 0		
AEGAM002	GC PLL enabled			AEG8N002	GB GYR state		
AEGAN002	GC rate loop cl			AEGAR002	GC Status LSW		
AEGAP002	GC quad loop cl			AEGAS002	GC ampl loop cl		
AEGCE002	GYR D Statwrd 1			AEGSF002	GYR CD Statw 2		
AEGCF002	GD PhaseLock en	enabled		AEGAT002	GC phas err low		
AEGCG002	GD ampl ctrl en	enabled		AEGAU002	GC High Gain ON		
AEGCH002	GD quad ctrl en	enabled		AEGAV002	fixed 0		
AEGCJ002	GD rate ctrl en	enabled		AEGAW002	GC GYR state		
AEGCK002	GD CL SF high	No HiRes mode		AEGCY002	GD Status LSW		
AEGCL002	GD DiodHeat sat	not saturated		AEGCZ002	GD ampl loop cl		
AEGCM002	GD DiodHeat ON	heater ON		AEGD0002	GD phas err low		
AEGCN002	GD GYR Heat ON	heater ON		AEGD1002	GD High Gain ON		
AEGCP002	GD GYR Heat sat	not saturated		AEGD2002	fixed 0		
AEGCR002	GD RateDriveSat	not saturated		AEGD3002	GD GYR state		
AEGCS002	GD start timeou	nominal		AEGTA002	GYR A rsnrtemp		
AEGCT002	GD edit NdCos	not edit NdCos		AEGTB002	GYR B rsnrtemp		
AEGCU002	GD param drive	turned on		AEGTC002	GYR C rsnrtemp		

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ID	DESCRIPTION	VALUE	UNIT	ID	DESCRIPTION	VALUE	UNIT
AES32002	STR2 Health Sts	Healthy		AEG5U002	GA PhaseLock en	enabled	
AES33002	CRS1 Health Sts		AEG5V002	GA ampl ctrl en	enabled		
AES34002	CRS2 Health Sts		AEG5W002	GA quad ctrl en	enabled		
AES35002	Unused		AEG5X002	GA rate ctrl en	enabled		
AES40002	Hlth Sts word2		AEG5Y002	GA CL SF high	No HiRes mode		
AES41002	GYR1 Health Sts		AEG5Z002	GA DiodHeat sat	not saturated		
AES42002	GYR2 Health Sts		AEG60002	GA DiodHeat ON	heater ON		
AES43002	GYR3 Health Sts		AEG61002	GA GYR Heat ON	heater ON		
AES44002	GYR4 Health Sts		AEG62002	GA GYR Heat sat	not saturated		
AES45002	RWL1 Health Sts		AEG63002	GA RateDriveSat	not saturated		
AES46002	RWL2 Health Sts		AEG64002	GA start timeou	nominal		
AES47002	RWL3 Health Sts		AEG65002	GA edit NdCos	not edit NdCos		
AES48002	RWL4 Health Sts		AEG66002	GA param drive	turned on		
AESK0002	Hlth Sts word3		AEG67002	GA PLL enabled	turned on		
AESK1002	RCSA Health Sts		AEG68002	GA rate loop cl	closed		
AESK2002	RCSB Health Sts		AEG69002	GA quad loop cl	closed		
AESK3002	GYRE1 Hlth Sts		AEG80002	GYR B Statwrđ 1			
AESK4002	GYRE2 Hlth Sts		AEG81002	GB PhaseLock en			
AESK5002	SAS1N Hlth Sts		AEG82002	GB ampl ctrl en			
AESK6002	SAS1R Hlth Sts		AEG83002	GB quad ctrl en			
AESK7002	SAS2N Hlth Sts		AEG84002	GB rate ctrl en			
AESK8002	SAS2R Hlth Sts		AEG85002	GB CL SF high			
AERRA001	CRS1 rate com X		AEG86002	GB DiodHeat sat			
AERRB001	CRS1 rate com Y		AEG87002	GB DiodHeat ON			
AERRC001	CRS1 rate com Z		AEG88002	GB GYR Heat ON			
AERRD001	CRS2 rate com X		AEG89002	GB GYR Heat sat			
AERRE001	CRS2 rate com Y		AEG8A002	GB RateDriveSat			
AERRF001	CRS2 rate com Z		AEG8B002	GB start timeou			
AERTD001	CRSm raw hous T		AEG8C002	GB edit NdCos			
AMRT1034	CRS-1 Temp		AEG8D002	GB param drive			
AMRT2035	CRS-2 Temp		AEG8E002	GB PLL enabled			
AEG5T002	GYR A Statwrđ 1		AEG8F002	GB rate loop cl			

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ID	DESCRIPTION	VALUE	UNIT	ID	DESCRIPTION	VALUE	UNIT
AES32002	STR2 Health Sts	Healthy		AEG5U002	GA PhaseLock en		
AES33002	CRS1 Health Sts		AEG5V002	GA ampl ctrl en			
AES34002	CRS2 Health Sts		AEG5W002	GA quad ctrl en			
AES35002	Unused		AEG5X002	GA rate ctrl en			
AES40002	Hlth Sts word2		AEG5Y002	GA CL SF high			
AES41002	GYR1 Health Sts		AEG5Z002	GA DiodHeat sat			
AES42002	GYR2 Health Sts		AEG60002	GA DiodHeat ON			
AES43002	GYR3 Health Sts		AEG61002	GA GYR Heat ON			
AES44002	GYR4 Health Sts		AEG62002	GA GYR Heat sat			
AES45002	RWL1 Health Sts		AEG63002	GA RateDriveSat			
AES46002	RWL2 Health Sts		AEG64002	GA start timeou			
AES47002	RWL3 Health Sts		AEG65002	GA edit NdCos			
AES48002	RWL4 Health Sts		AEG66002	GA param drive			
AESK0002	Hlth Sts word3		AEG67002	GA PLL enabled			
AESK1002	RCSA Health Sts		AEG68002	GA rate loop cl			
AESK2002	RCSB Health Sts		AEG69002	GA quad loop cl			
AESK3002	GYRE1 Hlth Sts		AEG80002	GYR B Statwrld 1			
AESK4002	GYRE2 Hlth Sts		AEG81002	GB PhaseLock en	enabled		
AESK5002	SAS1N Hlth Sts		AEG82002	GB ampl ctrl en	enabled		
AESK6002	SAS1R Hlth Sts		AEG83002	GB quad ctrl en	enabled		
AESK7002	SAS2N Hlth Sts		AEG84002	GB rate ctrl en	enabled		
AESK8002	SAS2R Hlth Sts		AEG85002	GB CL SF high	No HiRes mode		
AERRA001	CRS1 rate com X		AEG86002	GB DiodHeat sat	not saturated		
AERRB001	CRS1 rate com Y		AEG87002	GB DiodHeat ON	heater ON		
AERRC001	CRS1 rate com Z		AEG88002	GB GYR Heat ON	heater ON		
AERRD001	CRS2 rate com X		AEG89002	GB GYR Heat sat	not saturated		
AERRE001	CRS2 rate com Y		AEG8A002	GB RateDriveSat	not saturated		
AERRF001	CRS2 rate com Z		AEG8B002	GB start timeou	nominal		
AERTD001	CRSm raw hous T		AEG8C002	GB edit NdCos	not edit NdCos		
AMRT1034	CRS-1 Temp		AEG8D002	GB param drive	turned on		
AMRT2035	CRS-2 Temp		AEG8E002	GB PLL enabled	turned on		
AEG5T002	GYR A Statwrld 1		AEG8F002	GB rate loop cl	closed		

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ID	DESCRIPTION	VALUE	UNIT	ID	DESCRIPTION	VALUE	UNIT
AEG8G002	GB quad loop cl			AEGCV002	GD PLL enabled		
AEGA7002	GYR C Statwrd 1			AEGCW002	GD rate loop cl		
AEGA8002	GC PhaseLock en	enabled		AEGCX002	GD quad loop cl		
AEGA9002	GC ampl ctrl en	enabled		AEG6A002	GA Status LSW		
AEGAA002	GC quad ctrl en	enabled		AEG6B002	GA ampl loop cl		
AEGAB002	GC rate ctrl en	enabled		AEGSE002	GYR AB Statw 2		
AEGAC002	GC CL SF high	No HiRes mode		AEG6C002	GA phas err low		
AEGAD002	GC DiodHeat sat	saturated		AEG6D002	GA High Gain ON		
AEGAE002	GC DiodHeat ON	heater ON		AEG6E002	fixed 0		
AEGAF002	GC GYR Heat ON	heater ON		AEG6F002	GA GYR state		
AEGAG002	GC GYR Heat sat	not saturated		AEG8H002	GB Status LSW		
AEGAH002	GC RateDriveSat	not saturated		AEG8J002	GB ampl loop cl		
AEGAJ002	GC start timeou	nominal		AEG8K002	GB phas err low		
AEGAK002	GC edit NdCos	not edit NdCos		AEG8L002	GB High Gain ON		
AEGAL002	GC param drive	turned on		AEG8M002	fixed 0		
AEGAM002	GC PLL enabled	turned on		AEG8N002	GB GYR state		
AEGAN002	GC rate loop cl	closed		AEGAR002	GC Status LSW		
AEGAP002	GC quad loop cl	closed		AEGAS002	GC ampl loop cl		
AEGCE002	GYR D Statwrd 1			AEGSF002	GYR CD Statw 2		
AEGCF002	GD PhaseLock en			AEGAT002	GC phas err low		
AEGCG002	GD ampl ctrl en			AEGAU002	GC High Gain ON		
AEGCH002	GD quad ctrl en			AEGAV002	fixed 0		
AEGCJ002	GD rate ctrl en			AEGAW002	GC GYR state		
AEGCK002	GD CL SF high			AEGCY002	GD Status LSW		
AEGCL002	GD DiodHeat sat			AEGCZ002	GD ampl loop cl		
AEGCM002	GD DiodHeat ON			AEGD0002	GD phas err low		
AEGCN002	GD GYR Heat ON			AEGD1002	GD High Gain ON		
AEGCP002	GD GYR Heat sat			AEGD2002	fixed 0		
AEGCR002	GD RateDriveSat			AEGD3002	GD GYR state		
AEGCS002	GD start timeou			AEGTA002	GYR A rsnrtemp		
AEGCT002	GD edit NdCos			AEGTB002	GYR B rsnrtemp		
AEGCU002	GD param drive			AEGTC002	GYR C rsnrtemp		