ESA UNCLASSIFIED - Proprietary Information - ESA IPR

Doc No. :	n/a
Fop Issue :	n/a
Issue Date:	n/a

MMO switch ON/OFF for SVT
File: JX-SVT-002.xls
Author: a.dietz-bc

Procedure Summary

Objectives

The purpose it to switch ON/OFF the MMO to/from Dormant Mode.

Summary of Constraints

This procedure shall be only run during ground testing!

Spacecraft Configuration

Start of Procedure

MMO OFF

End of Procedure

MMO in dormant mode

Reference File(s)

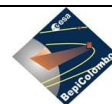**Input Command Sequences**

Output Command Sequences

AJXV002A
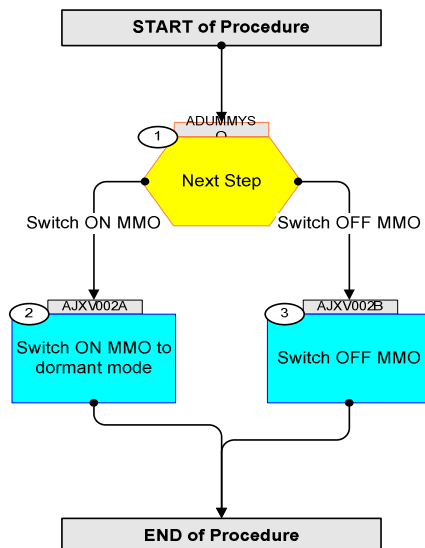AJXV002B

Referenced Displays

ANDs	GRDs	SLDs
DJXA0001		

Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
20/02/2017		1	Created	a.dietz-bc	
24/02/2017		2	Added TM check that both relays are set to heater side, before the CNVs are switched on.	a.dietz-bc	

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Procedure Flowchart Overview

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		Beginning of Procedure		
		Beginning of Sequence		
	ADUMMYSQ	**Selection** TimeTag type : B		
1		**Next Step** ***Next step(s):*** -> **2** Switch ON MMO -> **3** Switch OFF MMO		
	ADUMMYSQ	*End of Sequence*		
		Beginning of Sequence		
	AJXV002A	**SVT MMO DORMANT** TimeTag type : B		
2		**Switch ON MMO to dormant mode** ***Next step(s):*** -> **END**		
		In order to switch ON the MMO to dormant mode, the survival heaters have to be switched-on and the CNV-A and CNV-B LCLs powered.		
		First, check that MMO is Off.		
		Verify Telemetry **NPWD0318** MMO-SED-HTR-A ON-ST **= Off**		AND=DJXA0001 PKT=YCD0Z066
		Verify Telemetry **NPWD0518** MMO-SED-HTR-B ON-ST **= Off**		AND=DJXA0001 PKT=YCD0Z066
		Verify Telemetry **NPWD1601** MMO_CNV_A_ON_ST **= Off**		AND=DJXA0001 PKT=YCD0Z066
		Verify Telemetry **NPWD1602** MMO_CNV_B_ON_ST **= Off**		AND=DJXA0001 PKT=YCD0Z066
		Switch ON both survival heaters.		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.00.00	**Execute Telecommand** **ZPW01075 PCDU MMO-SED-HTR-A ON LCL2#18** TC Control Flags: GBM IL DSE **--Y -- ---**		
	+00.00.05	**Execute Telecommand** **ZPW01155 PCDU MMO-SED-HTR-B ON LCL4#18** TC Control Flags: GBM IL DSE **--Y -- ---**		
		Verify Telemetry **NPWD0318** MMO-SED-HTR-A ON-ST **= On**		AND=DJXA0001 PKT=YCD0Z066
		Verify Telemetry **NPWD0518** MMO-SED-HTR-B ON-ST **= On**		AND=DJXA0001 PKT=YCD0Z066
		Verify Telemetry **NRUD4002** MMO_CNV_A_RLY_ST-A **= Heater**		AND=DJXA0001 PKT=YCD0Z068
		Verify Telemetry **NRUD3002** MMO_CNV_B_RLY_ST-A **= Heater**		AND=DJXA0001 PKT=YCD0Z068
		Switch ON CNV-A and CNV-B.		
	+00.00.05	**Execute Telecommand** **ZPW09009 PCDU MMO_CNV_A_LCL_ON** TC Control Flags: GBM IL DSE **--Y -- ---**		
	+00.00.05	**Execute Telecommand** **ZPW09011 PCDU MMO_CNV_B_LCL_ON** TC Control Flags: GBM IL DSE **--Y -- ---**		
		Verify Telemetry **NPWD1601** MMO_CNV_A_ON_ST **= On**		AND=DJXA0001 PKT=YCD0Z066
		Verify Telemetry **NPWD1602** MMO_CNV_B_ON_ST **= On**		AND=DJXA0001 PKT=YCD0Z066
		Verify Telemetry **NRUD4002** MMO_CNV_A_RLY_ST-A **= Heater**		AND=DJXA0001 PKT=YCD0Z068

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		Verify Telemetry **NRUD3002** MMO_CNV_B_RLY_ST-A **= Heater**		AND=DJXA0001 PKT=YCD0Z068
AJXV002A		End of Sequence		
		Beginning of Sequence		
AJXV002B		**SVT MMO OFF** TimeTag type : B		
3		**Switch OFF MMO** ***Next step(s):*** -> **END**		
		In order to switch OFF the MMO from dormant mode, the survival heaters and the CNV-A and CNV-B LCLs have to be switched-off.		
		First, check that MMO is in dormant mode with both survival heaters switched-on.		
		Verify Telemetry **NPWD0318** MMO-SED-HTR-A ON-ST **= On**		AND=DJXA0001 PKT=YCD0Z066
		Verify Telemetry **NPWD0518** MMO-SED-HTR-B ON-ST **= On**		AND=DJXA0001 PKT=YCD0Z066
		Verify Telemetry **NPWD1601** MMO_CNV_A_ON_ST **= On**		AND=DJXA0001 PKT=YCD0Z066
		Verify Telemetry **NPWD1602** MMO_CNV_B_ON_ST **= On**		AND=DJXA0001 PKT=YCD0Z066
		Verify Telemetry **NRUD4002** MMO_CNV_A_RLY_ST-A **= Heater**		AND=DJXA0001 PKT=YCD0Z068
		Verify Telemetry **NRUD3002** MMO_CNV_B_RLY_ST-A **= Heater**		AND=DJXA0001 PKT=YCD0Z068
		Switch OFF CNV-A and CNV-B.		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display

	+00.00.00	**Execute Telecommand**
		ZPW09008 PCDU MMO_CNV_A_LCL_OFF
		  TC Control Flags:
		    GBM IL DSE
		  --Y -- ---		

	+00.00.05	**Execute Telecommand**
		ZPW09010 PCDU MMO_CNV_B_LCL_OFF
		  TC Control Flags:
		    GBM IL DSE
		  --Y -- ---		

		Verify Telemetry **NPWD1601** MMO_CNV_A_ON_ST **= Off**		AND=DJXA0001 PKT=YCD0Z066
		Verify Telemetry **NPWD1602** MMO_CNV_B_ON_ST **= Off**		AND=DJXA0001 PKT=YCD0Z066
		Switch OFF both survival heaters.		

	+00.00.05	**Execute Telecommand**
		ZPW01074 PCDU MMO-SED-HTR-A OFF LCL2#18
		  TC Control Flags:
		    GBM IL DSE
		  --Y -- ---		

	+00.00.05	**Execute Telecommand**
		ZPW01154 PCDU MMO-SED-HTR-B OFF LCL4#18
		  TC Control Flags:
		    GBM IL DSE
		  --Y -- ---		

		Verify Telemetry **NPWD0318** MMO-SED-HTR-A ON-ST **= Off**		AND=DJXA0001 PKT=YCD0Z066
		Verify Telemetry **NPWD0518** MMO-SED-HTR-B ON-ST **= Off**		AND=DJXA0001 PKT=YCD0Z066
	AJXV002B	End of Sequence		
		End of Procedure		