

SWA SVT-1 DPU File: IA-SVT-150.xls Author: daniel lakey	
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Procedure Summary

Objectives

Type Objectives Here

Summary of Constraints

n/a

Spacecraft Configuration

Start of Procedure

Type Pre-condition Here

End of Procedure

Type Post-condition Here

Reference File(s)

Input Command Sequences

Output Command Sequences

AIAV150A

Referenced Displays

ANDs GRDs SLDs

Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
02/11/2018		0.01	Initial check-in	dlakey	M7
02/11/2018		0.01	Renamed to SVT range	dlakey	M7
02/11/2018		1	Updated absolute -> relative times	dlakey	M7

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Procedure Flowchart Overview

START of Procedure

END of Procedure

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
Beginning of Procedure				
Beginning of Sequence				
	AIAV150A	AIAF150A		
		TimeTag type : B		
1		Step 1		
		Enable Sensor commanding (it is already enabled by default so nothing should change)		
	+00.00.00	Send SWA_TC_DPU_SENSOR_CONTROL ZIA58004 SWA_TC_DPU_SENSOR_CONTROL TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60852 SPARE = 0 <dec> PIA60853 EN_EAS2 = 0 <dec> PIA60854 EN_EAS1 = 0 <dec> PIA60855 EN_PAS = 0 <dec>		
2		Step 2		
		Check DPU RAM memory		
	+00.00.30	Send SWA_TC_MEM_CHECK ZIA58055 SWA_TC_MEM_CHECK TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA58056 MEMORY_ID = DPU_RAM (Def) PIA60330 START ADDRESS = 0x40700000 <hex> PIA60329 LENGTH = 4 <dec>		
		Check for reception of YIA58165 (TM(6,10), SWA_TM_MEM_CHK_RAM)		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
3		Step 3		
		Enable 'DumpAborted' report		
	+00.00.30	Send SWA_TC_EVENT_EN ZIA58058 SWA_TC_EVENT_EN TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60453 NUMBER_OF_EVENTS = 1 <dec> PIA58072 EVENT_ID = dumpAborted		
		Dump a large area of memory		
	+00.00.29	Send SWA_TC_MEM_DUMP ZIA58054 SWA_TC_MEM_DUMP TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA58056 MEMORY_ID = DPU_RAM (Def) PIA60330 START_ADDRESS = 0x40000000 <hex> PIA60329 LENGTH = 10000 <dec>		
		1 second later, abort the dump		
	+00.00.01	Send SWA_TC_MEM_DUMP_ABORT ZIA58056 SWA_TC_MEM_DUMP_ABORT TC Control Flags: GBM IL DSE --Y NC ---		
		Check for reception of YIA58416 (TM(5,2), ID 43516 (SWA_E_DUMP_ABORTED))		
		Disable 'DumpAborted' report		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.00.30	Send SWA_TC_EVENT_DS ZIA58059 SWA_TC_EVENT_DS TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60453 NUMBER_OF_EVENTS = 1 <dec> PIA58072 EVENT_ID = dumpAborted		
4		Step 4		
		Disable error event handler for EAS1 off event		
	+00.00.30	Send SWA_TC_DIS_ERREV_HANDLER ZIA58068 SWA_TC_DIS_ERREV_HANDLER TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60742 NUMBER_OF_ERR_EVENTS = 1 <dec> PIA60743 ERR_EVENT_ID = Eas1OffEvnt		
		Reset error count for EAS1 off event		
	+00.00.30	Send SWA_TC_RESET_ERRHAND_CNT ZIA58069 SWA_TC_RESET_ERRHAND_CNT TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60742 NUMBER_OF_ERR_EVENTS = 1 <dec> PIA60743 ERR_EVENT_ID = Eas1OffEvnt		
		Enable error event handler for EAS1 off event		
	+00.00.30	Send SWA_TC_EN_ERREV_HANDLER ZIA58067 SWA_TC_EN_ERREV_HANDLER TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60742 NUMBER_OF_ERR_EVENTS = 1 <dec> PIA60743 ERR_EVENT_ID = Eas1OffEvnt		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		Disable error event handler for EAS1 off event		
	+00.00.30	<pre>Send SWA_TC_DIS_ERREV_HANDLER ZIA58068 SWA_TC_DIS_ERREV_HANDLER TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60742 NUMBER_OF_ERR_EVENTS = 1 <dec> PIA60743 ERR_EVENT_ID = Eas1OffEvt</pre>		
5		Step 5		
		Dump the boot report		
	+00.00.30	<pre>Send SWA_TC_DPU_BOOT_REP_DUMP ZIA58704 SWA_TC_DPU_BOOT_REP_DUMP TC Control Flags: GBM IL DSE --Y NC ---</pre>		
		Check for reception of YIA58902 (TM(200,252), SWA_TM_FSW_STARTUP_REPORT)		
6		Step 6		
		Dump the Error Log		
	+00.00.30	<pre>Send SWA_TC_DPU_ERR_LOG ZIA58705 SWA_TC_DPU_ERR_LOG TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA59019 ACTION = DUMP</pre>		
		Check for reception of YIA58903 (TM(200,253), SWA_TM_ERROR_LOG_REPORT)		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
7		Step 7		
		Disable IIC test (it is disabled by default so nothing should change)		
	+00.00.30	Send SWA_TC_ENABLE_IIC_TEST ZIA58709 SWA_TC_ENABLE_IIC_TEST TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60744 ENABLE_FLAG = 1 <dec>		
8		Step 8		
		To test Clear Config Params TC, need to first uplink some config params:		
	+00.00.30	Send SWA_TC_DPU_MODIFY_CONF_PARS ZIA58706 SWA_TC_DPU_MODIFY_CONF_PARS TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60133 NUM_OF_PARS = 1 <dec> PIA60136 PAR_ID = 0x5000 <hex> PIA60135 PAR_DESC_SIZE = 12 <dec> PIA60134 PAR_DESC = 0x0 <hex> PIA60134 PAR_DESC = 0x0 <hex> PIA60134 PAR_DESC = 0x09 <hex> PIA60134 PAR_DESC = 0xC1 <hex> PIA60134 PAR_DESC = 0x3A <hex> PIA60134 PAR_DESC = 0xE1 <hex> PIA60134 PAR_DESC = 0x40 <hex> PIA60134 PAR_DESC = 0x0 <hex> PIA60134 PAR_DESC = 0x0 <hex> PIA60134 PAR_DESC = 0x01 <hex> PIA60134 PAR_DESC = 0x0 <hex> PIA60134 PAR_DESC = 0x0 <hex>		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.00.30	Send SWA_TC_DPU_CLEAR_CONF_PARS ZIA58710 SWA_TC_DPU_CLEAR_CONF_PARS TC Control Flags: GBM IL DSE --Y NC ---		
9		Step 9		
		Report Macro for PAS ON -12V		
	+00.00.30	Send SWA_TC_DPU_REP_MACRO ZIA58712 SWA_TC_DPU_REP_MACRO TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60152 MACRO_ID = 0x0011 <hex>		
		Check for reception of YIA58901 (TM(200,251), SWA_TM_MACRO_REPORT)		
		Modify Macro for PAS ON -12V		
	+00.00.30	Send SWA_TC_DPU_MOD_MACRO ZIA58711 SWA_TC_DPU_MOD_MACRO TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60146 MACRO_ID = 0x0011 <hex> PIA60149 NUM_OF_STEPS = 2 <dec> PIA60150 POSITION = 0x0005 <hex> PIA60410 ACTION_ID = 0x31 <hex> PIA60409 ACK_REQ = 0x00 <hex> PIA60151 TIME_OFFSET = 0x0000 <hex> PIA60147 MAJ_OFF = 0x0000 <hex> PIA60148 MIN_OFF = 0x0000 <hex> PIA60139 ABS_TIME = 0x0000 <hex>		

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		PIA60140 ADD_INFO_0 = 0x01 <hex> PIA60142 ADD_INFO_1 = 0x00 <hex> PIA60143 ADD_INFO_2 = 0x26 <hex> PIA60144 ADD_INFO_3 = 0x00 <hex> PIA60145 ADD_INFO_4 = 0x00 <hex> PIA60141 ADD_INFO_5 = 0xCC <hex> PIA60150 POSITION = 0x0006 <hex> PIA60410 ACTION_ID = 0x31 <hex> PIA60409 ACK_REQ = 0x00 <hex> PIA60151 TIME_OFFSET = 0x0000 <hex> PIA60147 MAJ_OFF = 0x0000 <hex> PIA60148 MIN_OFF = 0x0000 <hex> PIA60139 ABS_TIME = 0x0000 <hex> PIA60140 ADD_INFO_0 = 0x01 <hex> PIA60142 ADD_INFO_1 = 0x00 <hex> PIA60143 ADD_INFO_2 = 0x26 <hex> PIA60144 ADD_INFO_3 = 0x01 <hex> PIA60145 ADD_INFO_4 = 0x0F <hex> PIA60141 ADD_INFO_5 = 0x32 <hex>		
		Discard macro modification for PAS ON -12V		
	+00.00.30	Send SWA_TC_DPU_DISC_MACRO ZIA58715 SWA_TC_DPU_DISC_MACRO TC Control Flags: GBM IL DSE --Y NC ---		
10		Step 10		
		Put DPU into SAFE mode (takes one minute)		
	+00.00.30	Send SWA_TC_DPU_SAFE ZIA58725 SWA_TC_DPU_SAFE TC Control Flags: GBM IL DSE --Y NC ---		
		30s later halt macro execution		

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	+00.00.30	Send SWA_TC_DPU_MACRO_STOP ZIA58736 SWA_TC_DPU_MACRO_STOP TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60745 SD = STOP (Def) PIA60746 SE2 = NO_STOP PIA60747 SE1 = NO_STOP PIA60748 SP = NO_STOP PIA60749 SH = NO_STOP		
		Check for reception of YIA58914 (TM(5,1), SWA_E_DPU_MACRO_ALT)		
11		Step 11		
		DPU to STANDBY mode		
	+00.00.30	Send SWA_TC_DPU_STDBY ZIA58702 SWA_TC_DPU_STDBY TC Control Flags: GBM IL DSE --Y NC ---		
		Check for reception of YIA58446 (TM(5,1), ID 43546 (SWA_E_DPU_STDBY_STATE))		
12		Step 12		
		DPU to OPERATIONAL mode		
	+00.00.30	Send SWA_TC_DPU_OPS ZIA58703 SWA_TC_DPU_OPER TC Control Flags: GBM IL DSE --Y NC ---		

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		Check for reception of YIA58445 (TM(5,1), ID 43545 (SWA_E_DPU_OPS_STATE))		
13		Step 13		
		Copy PAS tables into scratch		
	+00.00.30	Send SWA_TC_DPU_INIT_SDP_CONFIG ZIA58737 SWA_TC_DPU_INIT_SDP_CONFIG TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60750 CE = INIT (Def) PIA60751 CP = NO_INIT		
14		Step 14		
		Load MRAM2 version of DPU FSW (patchable)		
	+00.00.30	Send SWA_TC_SELECT_FSW_COPY_TO_LOAD ZIA58738 SWA_TC_SELECT_FSW_COPY_TO_LOAD TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60752 FSW2L = PATCHABLE		
		Load MRAM1 version of DPU FSW (normal)		
	+00.00.30	Send SWA_TC_SELECT_FSW_COPY_TO_LOAD ZIA58738 SWA_TC_SELECT_FSW_COPY_TO_LOAD TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60752 FSW2L = NOMINAL (Def)		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
15		Step 15		
		Modify PAS time offset w.r.t. RPW for snapshot		
	+00.00.30	Send SWA_TC_DPU_TIME_OFFSET ZIA58938 SWA_TC_DPU_TIME_OFFSET TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60741 OFFSET = 0x2 <hex>		
AIAV150A		End of Sequence		
End of Procedure				