SWA Turn up PAS HVs
File: IA-FCP-066.xls
Author: daniel lakey

Procedure Summary

Objectives

PAS post-thruster-firing recovery

Summary of Constraints

n/a

Spacecraft Configuration

Start of Procedure

PAS on, HVs down

End of Procedure

PAS on, HVs up

Reference File(s)

Input Command Sequences

Output Command Sequences

AIAF066A
AIAF066B

Referenced Displays

ANDs **GRDs** **SLDs**

Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
14/01/2020		1	SOL_FCR-60 : Update SWA procedures for CSW 3.0.3 & latest FSW	dlakey	M7
20/01/2020	3				M7
08/05/2020		2	SOL_FCR-310 - SWA Procedure Overhaul	dlakey	M7

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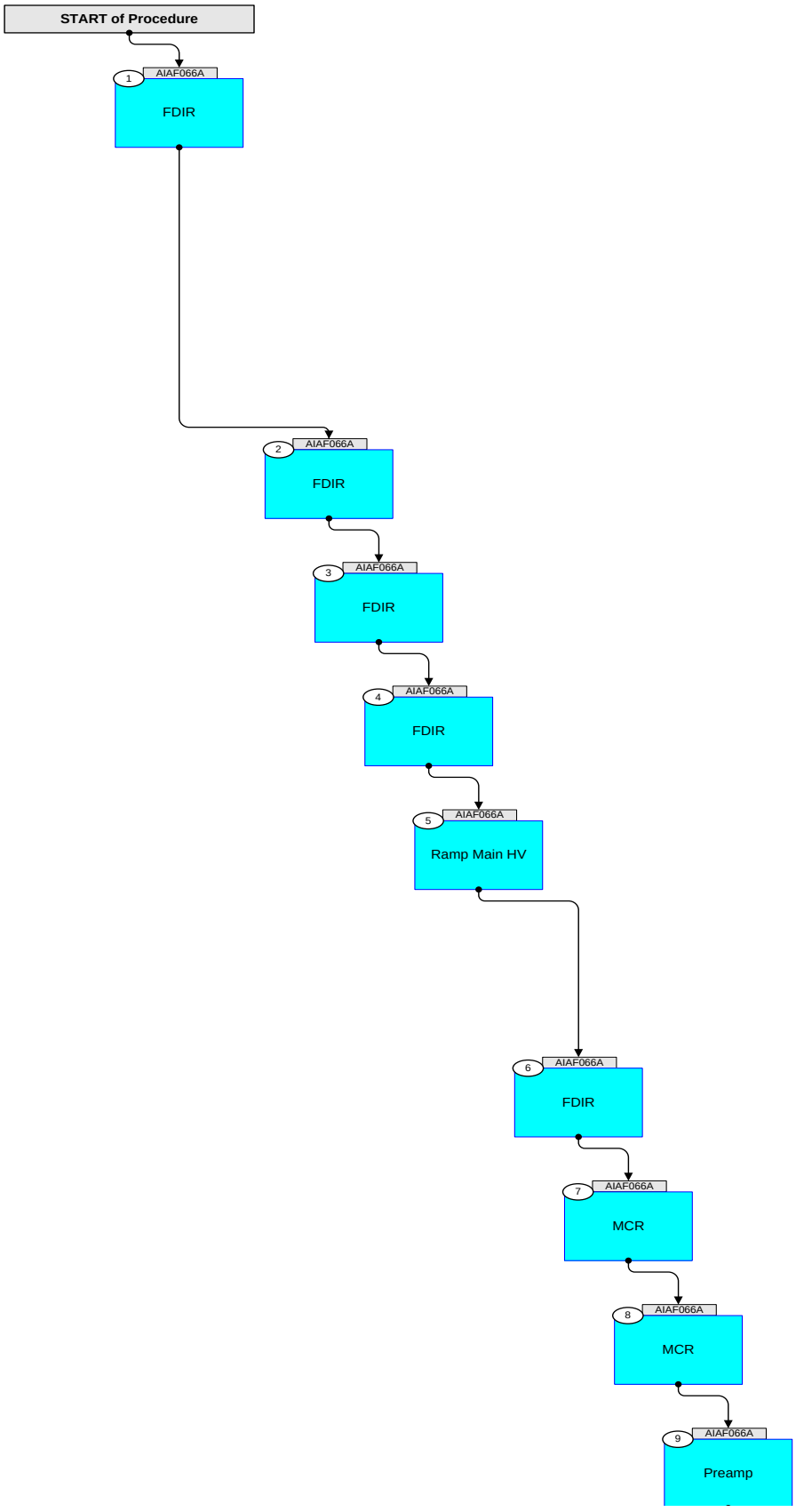
Procedure Flowchart Overview



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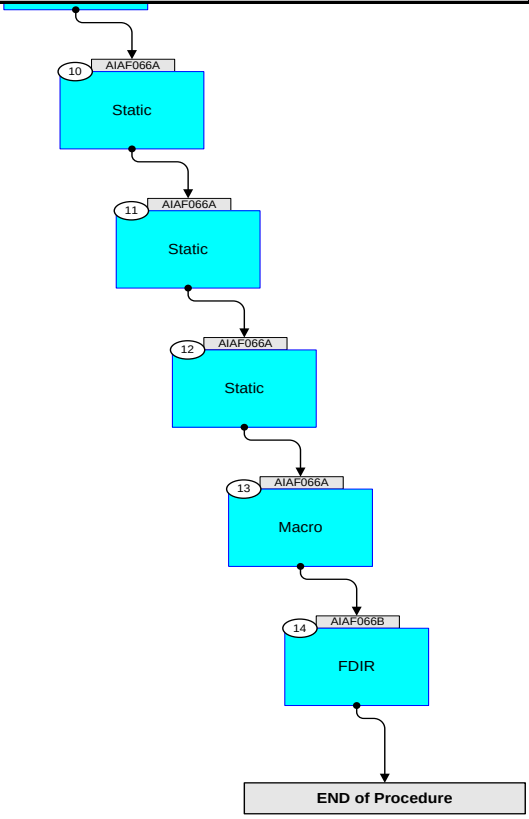

Step	Label/Time	Activity/Remarks/Branch	CK	Display
		Beginning of Procedure		
		Beginning of Sequence		
	AIAF066A	**SWA PAS Turn Up HVs** SeqFlags [Crit/Plan/Stdalone/Sched] : NSYN Forced Subschedule : SWA (109) TimeTag type : B **Formal Parameter List** {FP} **XF066A01** *DefVal* = 570 (NOMINAL_VAL) <hex>		
1		**FDIR** ***Next step(s):*** -> **2**		
		Disable all PAS FDIR		
	+00.00.00	**Send SWA_TC_PARS_MON_DIS** **ZIA58064 SWA_TC_PARS_MON_DIS** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60452** NUM_OF_MON_ID **= 28 <dec>** **PIA60449** MON_ID **= V_MON_C_MI <hex>** **PIA60449** MON_ID **= V_MON_L_MI <hex>** **PIA60449** MON_ID **= I_MON_C_MI <hex>** **PIA60449** MON_ID **= I_MON_L_MI <hex>** **PIA60449** MON_ID **= T_MON_C_MI <hex>** **PIA60449** MON_ID **= T_MON_L_MI <hex>** **PIA60449** MON_ID **= P24_VCEMOUT_MI <hex>** **PIA60449** MON_ID **= P5_VCEMOUT_MI <hex>** **PIA60449** MON_ID **= P12_VHTOUT_MI <hex>** **PIA60449** MON_ID **= M12_VHTOUT_MI <hex>** **PIA60449** MON_ID **= P3V_3_FPGA_OMI <hex>** **PIA60449** MON_ID **= P1V_5_FPGA_OMI <hex>** **PIA60449** MON_ID **= TEMP_DCDC_MI <hex>** **PIA60449** MON_ID **= TEMP_FPGA_MI <hex>** **PIA60449** MON_ID **= HK_IP24V_CEMMI <hex>** **PIA60449** MON_ID **= HK_IP5V_CEMMI <hex>** **PIA60449** MON_ID **= HK_IP12V_HTMI <hex>** **PIA60449** MON_ID **= HK_IM12V_HTMI <hex>** **PIA60449** MON_ID **= HK_I3V3_FPGAMI <hex>** **PIA60449** MON_ID **= HK_I1V5_FPGAMI <hex>** **PIA60449** MON_ID **= HK_IP28V_PRIMI <hex>** **PIA60449** MON_ID **= HK_MHV_POSMI <hex>** **PIA60449** MON_ID **= HK_MHV_NEGMI <hex>** **PIA60449** MON_ID **= TEMP_HVPS_MI <hex>** **PIA60449** MON_ID **= HK_IP28V_PRSCI <hex>** **PIA60449** MON_ID **= PASampOverCurr <hex>** **PIA60449** MON_ID **= PASSPWHB_MI <hex>** **PIA60449** MON_ID **= PASMISSACK_MI <hex>**		

Step	Label/Time	Activity/Remarks/Branch	CK	Display
2		**FDIR** ***Next step(s):*** -> **3**		
		Enable three PAS FDIR Monitors		
	+00.00.01	**Send SWA_TC_PARS_MON_EN** **ZIA58063 SWA_TC_PARS_MON_EN** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60452** NUM_OF_MON_ID **= 3 <dec>** **PIA60449** MON_ID **= PASSPWHB_MI <hex>** **PIA60449** MON_ID **= PASMISSACK_MI <hex>** **PIA60449** MON_ID **= HK_IP28V_PRIMI <hex>**		
3		**FDIR** ***Next step(s):*** -> **4**		
		Disable PAS 28V Current Monitor - Standby		
	+00.00.30	**Send SWA_TC_PARS_MON_DIS** **ZIA58064 SWA_TC_PARS_MON_DIS** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60452** NUM_OF_MON_ID **= 1 <dec>** **PIA60449** MON_ID **= HK_IP28V_PRIMI <hex>**		
4		**FDIR** ***Next step(s):*** -> **5**		
		Enable PAS 28V Current Monitor - Science		

Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.00.01	**Send SWA_TC_PARS_MON_EN** **ZIA58063 SWA_TC_PARS_MON_EN** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60452** NUM_OF_MON_ID **= 1 <dec>** **PIA60449** MON_ID **= HK_IP28V_PRSCI <hex>**		
5		**Ramp Main HV** ***Next step(s):*** -> **6**		
	+00.00.01	**Execute Telecommand** **ZIA58869 SWA_TC_PAS_SET_MAIN_HV** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60344** HV_VAL **= 199 <hex>**		
	+00.00.10	**Execute Telecommand** **ZIA58869 SWA_TC_PAS_SET_MAIN_HV** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60344** HV_VAL **= 333 <hex>**		
	+00.00.10	**Execute Telecommand** **ZIA58869 SWA_TC_PAS_SET_MAIN_HV** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60344** HV_VAL **= 4CC <hex>**		
	+00.00.10	**Execute Telecommand** **ZIA58869 SWA_TC_PAS_SET_MAIN_HV** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60344** HV_VAL **= 666 <hex>**		

Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.00.10	**Execute Telecommand** **ZIA58869 SWA_TC_PAS_SET_MAIN_HV** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60344** HV_VAL **= 7FF <hex>**		
	+00.00.10	**Execute Telecommand** **ZIA58869 SWA_TC_PAS_SET_MAIN_HV** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60344** HV_VAL **= 999 <hex>**		
	+00.00.10	**Execute Telecommand** **ZIA58869 SWA_TC_PAS_SET_MAIN_HV** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60344** HV_VAL **= B33 <hex>**		
	+00.00.10	**Execute Telecommand** **ZIA58869 SWA_TC_PAS_SET_MAIN_HV** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60344** HV_VAL **= CCC <hex>**		
	+00.00.10	**Execute Telecommand** **ZIA58869 SWA_TC_PAS_SET_MAIN_HV** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60344** HV_VAL **= E66 <hex>**		
	+00.00.10	**Execute Telecommand** **ZIA58869 SWA_TC_PAS_SET_MAIN_HV** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60344** HV_VAL **= FFF <hex>**		

Step	Label/Time	Activity/Remarks/Branch	CK	Display
6		**FDIR** ***Next step(s):*** -> **7**		
		Enable 2 FDIR monitors		
	+00.00.10	**Send SWA_TC_PARS_MON_EN** **ZIA58063 SWA_TC_PARS_MON_EN** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60452** NUM_OF_MON_ID **= 2 <dec>** **PIA60449** MON_ID **= P12_VHTOUT_MI <hex>** **PIA60449** MON_ID **= M12_VHTOUT_MI <hex>**		
7		**MCR** ***Next step(s):*** -> **8**		
		Set the Master Control Register (CEM HV Enable State)		
	+00.00.30	**Send SWA_TC_PAS_WR_MASTER_CTRL_REG** **ZIA58863 SWA_TC_PAS_WR_MASTER_CTRL_REG** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60343** REG_VAL **= 1F <hex>**		
8		**MCR** ***Next step(s):*** -> **9**		
		Set the Master Control Register (CEMs HV on central)		
	+00.00.02	**Send SWA_TC_PAS_WR_MASTER_CTRL_REG** **ZIA58863 SWA_TC_PAS_WR_MASTER_CTRL_REG** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60343** REG_VAL **= 7 <hex>**		

Step	Label/Time	Activity/Remarks/Branch	CK	Display
9		**Preamp** ***Next step(s):*** -> **10**		
		Power on preamps		
	+00.00.02	**Send SWA_TC_PAS_WR_PREAMP_CTRL_REG** **ZIA58862 SWA_TC_PAS_WR_PREAMP_CTRL_REG** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA58062** PRE_AMP1 **= ON** (Def) **PIA58063** PRE_AMP2 **= ON** (Def)		
10		**Static** ***Next step(s):*** -> **11**		
		Load static table		
	+00.00.05	**Send SWA_TC_PAS_LOAD_STATIC_TABLE** **ZIA58876 SWA_TC_PAS_LOAD_STATIC_TABLE** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60700** CHANNELTRON_CONF **= 0 <hex>** **PIA60713** FIRST_ENERGY **= 8 <hex>** **PIA60705** ENERGY_NUMBER **= 40 <hex>** **PIA60712** FIRST_ELEV **= 0 <hex>** **PIA60704** ELEV_NUMB **= 9 <hex>** **PIA60720** K_VALUE **= 1 <hex>** **PIA60721** N_VALUE **= 1 <hex>**		
11		**Static** ***Next step(s):*** -> **12**		
		Start static scheme		

Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.00.05	**Send SWA_TC_PAS_WR_MAILBOX_CTRL** **ZIA58873 SWA_TC_PAS_WR_MAILBOX_CTRL** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60347** MBV_VAL **= 1 <hex>**		
12		**Static** ***Next step(s):*** -> **13**		
		Stop static scheme		
	+00.00.30	**Send SWA_TC_PAS_WR_MAILBOX_CTRL** **ZIA58873 SWA_TC_PAS_WR_MAILBOX_CTRL** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60347** MBV_VAL **= FF <hex>**		
13		**Macro** ***Next step(s):*** -> **14**		
		Run detector on Macro CEM		
	+00.00.05	**Send SWA_TC_PAS_HV_RAMP_UP** **ZIA58856 SWA_TC_PAS_HV_RAMP_UP** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60791** INIT_VALUE **= 0 <hex>** **PIA60790** NOMINAL_VAL **= XF066A01** **PIA60792** STEP_VALUE **= 29 <hex>** **PIA60793** HV_WAIT **= 19 <hex>**		
	AIAF066A	End of Sequence		

Step	Label/Time	Activity/Remarks/Branch	CK	Display
	AIAF066B	Beginning of Sequence **SWA PAS TurnUpHvFDIR** SeqFlags [Crit/Plan/Stdalone/Sched] : NSYN Forced Subschedule : SWA (109) TimeTag type : B		
14		**FDIR** ***Next step(s):*** -> **END**		
		Enable remaining PAS FDIR monitors		
	+00.00.00	**Send SWA_TC_PARS_MON_EN** **ZIA58063 SWA_TC_PARS_MON_EN** TC Control Flags: GBM IL DSE **--Y NC ---** Command Parameters : **PIA60452** NUM_OF_MON_ID **= 15 <dec>** **PIA60449** MON_ID **= V_MON_C_MI <hex>** **PIA60449** MON_ID **= V_MON_L_MI <hex>** **PIA60449** MON_ID **= T_MON_C_MI <hex>** **PIA60449** MON_ID **= T_MON_L_MI <hex>** **PIA60449** MON_ID **= P24_VCEMOUT_MI <hex>** **PIA60449** MON_ID **= P5_VCEMOUT_MI <hex>** **PIA60449** MON_ID **= P3V_3_FPGA_OMI <hex>** **PIA60449** MON_ID **= P1V_5_FPGA_OMI <hex>** **PIA60449** MON_ID **= TEMP_DCDC_MI <hex>** **PIA60449** MON_ID **= TEMP_FPGA_MI <hex>** **PIA60449** MON_ID **= HK_IP24V_CEMMI <hex>** **PIA60449** MON_ID **= HK_IP5V_CEMMI <hex>** **PIA60449** MON_ID **= HK_I3V3_FPGAMI <hex>** **PIA60449** MON_ID **= HK_I1V5_FPGAMI <hex>** **PIA60449** MON_ID **= TEMP_HVPS_MI <hex>**		
	AIAF066B	End of Sequence		
		End of Procedure		