

SWA SVT-1 EAS1 File: IA-SVT-151.xls Author: daniel lakey	
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Procedure Summary

Objectives

SWA SVT-1 EAS1

Summary of Constraints

n/a

Spacecraft Configuration

Start of Procedure

EAS1 OFF

End of Procedure

EAS1 ON

Reference File(s)

Input Command Sequences

Output Command Sequences

AI1AV151A

Referenced Displays

ANDs GRDs SLDs

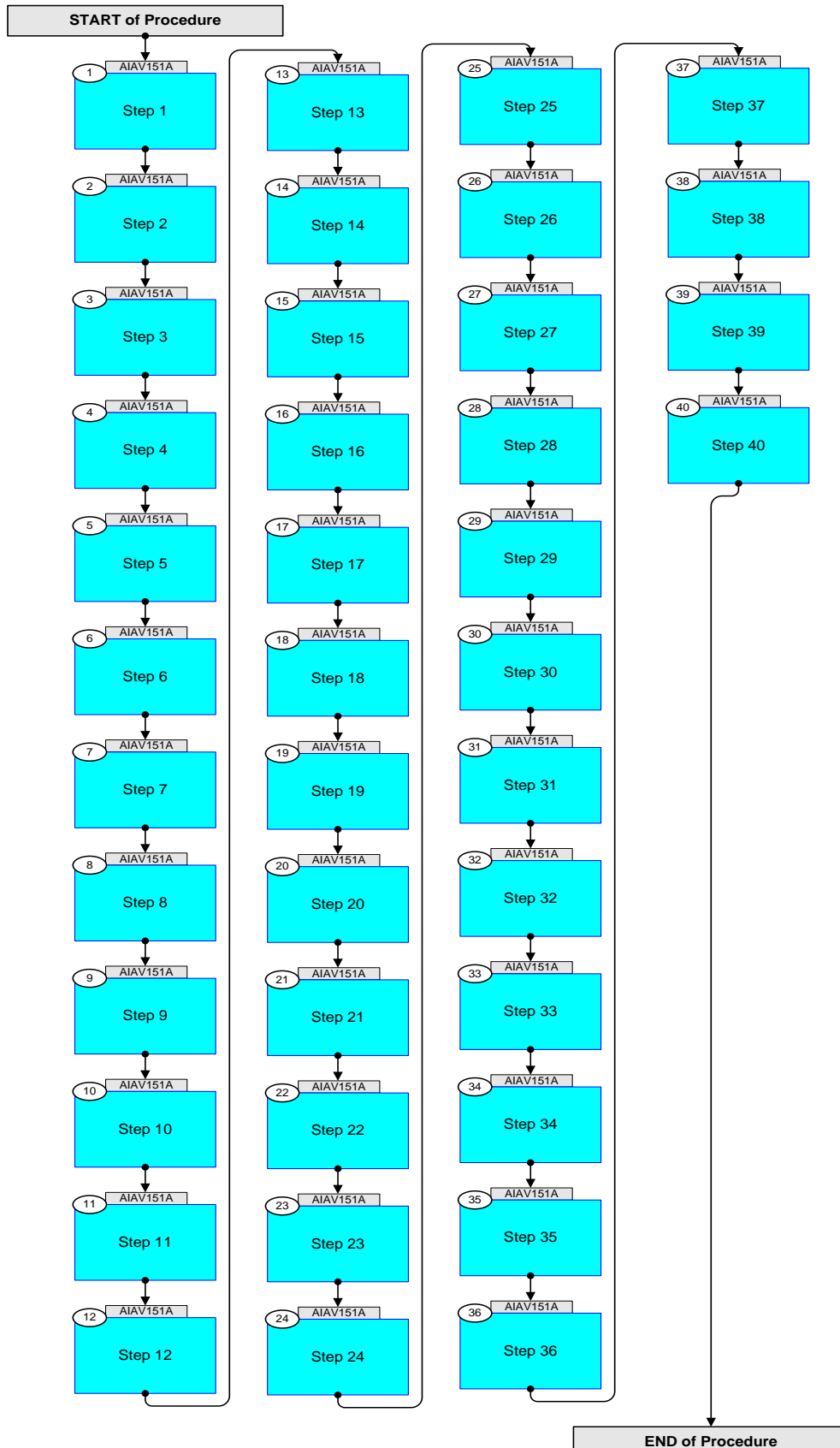
Configuration Control Information

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
14/02/2019		2	Updated to V2	dlakey	M7

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Procedure Flowchart Overview



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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				
	AIAV151A	SWA SVT-1 EAS1 TimeTag type : B		
1		Step 1 <i>Next step(s):</i> -> 2		
		Power on EAS1		
	+00.00.00	Send SWA_TC_EAS1_ON ZIA58755 SWA_TC_EAS1_ON TC Control Flags: GBM IL DSE --Y NC ---		
2		Step 2 <i>Next step(s):</i> -> 3		
		Enable EAS1 HK		
	+00.01.00	Send SWA_TC_HK_EN ZIA58050 SWA_TC_HK_EN TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA58050 TMSID = EAS1_SENS_HK		
3		Step 3 <i>Next step(s):</i> -> 4		
		Clear Sequence Shared RAM		
	+00.00.30	Send SWA_TC_EAS1_CLEAR_RAM ZIA58763 SWA_TC_EAS1_CLEAR_RAM TC Control Flags: GBM IL DSE --Y NC ---		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
4		<p>Step 4</p> <p><i>Next step(s):</i> -> 5</p>		
		Write master control register		
	+00.00.30	<p>Send SWA_TC_EAS1_MASTER_REG_WRITE ZIA58776 SWA_TC_EAS1_MASTER_REG_WRITE</p> <p>TC Control Flags: GBM IL DSE --Y NC ---</p> <p>Command Parameters : PIA60423 BYTE_0 = 0x00 <hex> PIA60424 BYTE_1 = 0x00 <hex> PIA60425 BYTE_2 = 0x60 <hex></p>		
		Turn EAS1 preamp1 on		
	+00.00.30	<p>Send SWA_TC_EAS1_PRE_AMP_WRITE ZIA58777 SWA_TC_EAS1_PRE_AMP_WRITE</p> <p>TC Control Flags: GBM IL DSE --Y NC ---</p> <p>Command Parameters : PIA58066 PRE_AMP1 = ON (Def) PIA58067 PRE_AMP2 = OFF</p>		
5		<p>Step 5</p> <p><i>Next step(s):</i> -> 6</p>		
		Turn EAS1 preamp2 on		
	+00.00.30	<p>Send SWA_TC_EAS1_PRE_AMP_WRITE ZIA58777 SWA_TC_EAS1_PRE_AMP_WRITE</p> <p>TC Control Flags: GBM IL DSE --Y NC ---</p> <p>Command Parameters : PIA58066 PRE_AMP1 = ON (Def) PIA58067 PRE_AMP2 = ON (Def)</p>		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
6		<p>Step 6</p> <p><i>Next step(s):</i> -> 7</p>		
		Upload sequence table		
	+00.00.30	<p>Send SWA_TC_EAS1_SEQ_TABLE_UPLOAD ZIA58772 SWA_TC_EAS1_SEQ_TABLE_UPLOAD TC Control Flags: GBM IL DSE --Y NC ---</p>		
7		<p>Step 7</p> <p><i>Next step(s):</i> -> 8</p>		
		Set the deflection scan ratio table		
	+00.00.30	<p>Send SWA_TC_EAS1_SET_DEFL_SCAN_RATIO ZIA58765 SWA_TC_EAS1_SET_DEFL_SCAN_RATIO TC Control Flags: GBM IL DSE --Y NC ---</p> <p>Command Parameters :</p> <p>PIA60474 VAL_0 = 0x80 <hex> PIA60475 VAL_1 = 0x00 <hex> PIA60578 VAL_2 = 0x00 <hex> PIA60589 VAL_3 = 0x00 <hex> PIA60600 VAL_4 = 0x00 <hex> PIA60611 VAL_5 = 0x00 <hex> PIA60622 VAL_6 = 0x80 <hex> PIA60633 VAL_7 = 0x00 <hex> PIA60644 VAL_8 = 0x00 <hex></p> <p>PIA60655 VAL_9 = 0x00 <hex> PIA60476 VAL_10 = 0x00 <hex> PIA60487 VAL_11 = 0x00 <hex> PIA60498 VAL_12 = 0x70 <hex> PIA60509 VAL_13 = 0x00 <hex> PIA60520 VAL_14 = 0x00 <hex> PIA60531 VAL_15 = 0x00 <hex> PIA60542 VAL_16 = 0x00 <hex> PIA60553 VAL_17 = 0x00 <hex> PIA60564 VAL_18 = 0x60 <hex> PIA60575 VAL_19 = 0x00 <hex> PIA60579 VAL_20 = 0x00 <hex> PIA60580 VAL_21 = 0x00 <hex> PIA60581 VAL_22 = 0x00 <hex> PIA60582 VAL_23 = 0x00 <hex></p>		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		PIA60583 VAL_24 = 0x50 <hex>		
		PIA60584 VAL_25 = 0x00 <hex>		
		PIA60585 VAL_26 = 0x00 <hex>		
		PIA60586 VAL_27 = 0x00 <hex>		
		PIA60587 VAL_28 = 0x00 <hex>		
		PIA60588 VAL_29 = 0x00 <hex>		
		PIA60590 VAL_30 = 0x40 <hex>		
		PIA60591 VAL_31 = 0x00 <hex>		
		PIA60592 VAL_32 = 0x00 <hex>		
		PIA60593 VAL_33 = 0x00 <hex>		
		PIA60594 VAL_34 = 0x00 <hex>		
		PIA60595 VAL_35 = 0x00 <hex>		
		PIA60596 VAL_36 = 0x30 <hex>		
		PIA60597 VAL_37 = 0x00 <hex>		
		PIA60598 VAL_38 = 0x00 <hex>		
		PIA60599 VAL_39 = 0x00 <hex>		
		PIA60601 VAL_40 = 0x00 <hex>		
		PIA60602 VAL_41 = 0x00 <hex>		
		PIA60603 VAL_42 = 0x20 <hex>		
		PIA60604 VAL_43 = 0x00 <hex>		
		PIA60605 VAL_44 = 0x00 <hex>		
		PIA60606 VAL_45 = 0x00 <hex>		
		PIA60607 VAL_46 = 0x00 <hex>		
		PIA60608 VAL_47 = 0x00 <hex>		
		PIA60609 VAL_48 = 0x00 <hex>		
		PIA60610 VAL_49 = 0x00 <hex>		
		PIA60612 VAL_50 = 0x00 <hex>		
		PIA60613 VAL_51 = 0x20 <hex>		
		PIA60614 VAL_52 = 0x00 <hex>		
		PIA60615 VAL_53 = 0x00 <hex>		
		PIA60616 VAL_54 = 0x00 <hex>		
		PIA60617 VAL_55 = 0x00 <hex>		
		PIA60618 VAL_56 = 0x00 <hex>		
		PIA60619 VAL_57 = 0x30 <hex>		
		PIA60620 VAL_58 = 0x00 <hex>		
		PIA60621 VAL_59 = 0x00 <hex>		
		PIA60623 VAL_60 = 0x00 <hex>		
		PIA60624 VAL_61 = 0x00 <hex>		
		PIA60625 VAL_62 = 0x00 <hex>		
		PIA60626 VAL_63 = 0x40 <hex>		
		PIA60627 VAL_64 = 0x00 <hex>		
		PIA60628 VAL_65 = 0x00 <hex>		
		PIA60629 VAL_66 = 0x00 <hex>		
		PIA60630 VAL_67 = 0x00 <hex>		
		PIA60631 VAL_68 = 0x00 <hex>		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		PIA60632 VAL_69 = 0x50 <hex> PIA60634 VAL_70 = 0x00 <hex> PIA60635 VAL_71 = 0x00 <hex> PIA60636 VAL_72 = 0x00 <hex> PIA60637 VAL_73 = 0x00 <hex> PIA60638 VAL_74 = 0x00 <hex> PIA60639 VAL_75 = 0x60 <hex> PIA60640 VAL_76 = 0x00 <hex> PIA60641 VAL_77 = 0x00 <hex> PIA60642 VAL_78 = 0x00 <hex> PIA60643 VAL_79 = 0x00 <hex> PIA60645 VAL_80 = 0x00 <hex> PIA60646 VAL_81 = 0x70 <hex> PIA60647 VAL_82 = 0x00 <hex> PIA60648 VAL_83 = 0x00 <hex> PIA60649 VAL_84 = 0x00 <hex> PIA60650 VAL_85 = 0x00 <hex> PIA60651 VAL_86 = 0x00 <hex> PIA60652 VAL_87 = 0x80 <hex> PIA60653 VAL_88 = 0x00 <hex> PIA60654 VAL_89 = 0x00 <hex> PIA60656 VAL_90 = 0x00 <hex> PIA60657 VAL_91 = 0x00 <hex> PIA60658 VAL_92 = 0x00 <hex> PIA60659 VAL_93 = 0x80 <hex> PIA60660 VAL_94 = 0x00 <hex> PIA60661 VAL_95 = 0x00 <hex>		
8		Step 8 Next step(s): -> 9		
		Set the Hemisphere high voltage		
	+00.00.30	Send SWA_TC_EAS1_SET_HEM_HIGH_VOLT ZIA58767 SWA_TC_EAS1_SET_HEM_HIGH_VOLT TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60441 HV_0 = 0x02 <hex> PIA60442 HV_1 = 0x9C <hex> PIA60443 HV_2 = 0x80 <hex>		
9		Step 9 Next step(s): -> 10		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		Set the Hemisphere voltage ratio		
	+00.00.30	<pre>Send SWA_TC_EAS1_SET_HEM_VOLT_RATIO ZIA58766 SWA_TC_EAS1_SET_HEM_VOLT_RATIO TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60469 VR_0 = 0xDE <hex> PIA60470 VR_1 = 0xB8 <hex> PIA60471 VR_2 = 0x51 <hex></pre>		
10		<p>Step 10</p> <p>Next step(s): -> 11</p>		
		Set the VGF ratio upload		
	+00.00.30	<pre>Send SWA_TC_EAS1_SET_VGF_RATIO_UP ZIA58768 SWA_TC_EAS1_SET_VGF_RATIO_UP TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60460 VGF_0 = 0 <dec> PIA60461 VGF_1 = 0 <dec> PIA60462 VGF_2 = 0 <dec> PIA60463 VGF_3 = 0 <dec> PIA60464 VGF_4 = 0 <dec> PIA60465 VGF_5 = 0 <dec> PIA60466 VGF_6 = 0 <dec> PIA60467 VGF_7 = 0 <dec> PIA60468 VGF_8 = 0 <dec></pre>		
11		<p>Step 11</p> <p>Next step(s): -> 12</p>		
		Write the VGF setting control		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.00.30	Send SWA_TC_EAS1_VGF_SET_CTRL ZIA58770 SWA_TC_EAS1_VGF_SET_CTRL TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA59035 SET_VAL = 0 <dec> (Def)		
12		Step 12 Next step(s): -> 13		
		Start the sequence table		
	+00.00.30	Send SWA_TC_EAS1_START_SEQ_TABLE ZIA58773 SWA_TC_EAS1_START_SEQ_TABLE TC Control Flags: GBM IL DSE --Y NC ---		
13		Step 13 Next step(s): -> 14		
		Set the maximum voltage for the MCP		
	+00.00.30	Send SWA_TC_EAS1_SET_MCP_MAX_HV ZIA58783 SWA_TC_EAS1_SET_MCP_MAX_HV TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60169 MAX_VAL = 0x800 <hex>		
14		Step 14 Next step(s): -> 15		
		Set the new voltage for the MCP		

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	+00.00.30	Send SWA_TC_EAS1_SET_MCP_HV ZIA58784 SWA_TC_EAS1_SET_MCP_HV TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60218 NEW_VAL = 0x400 <hex>		
15		Step 15 Next step(s): -> 16		
		Load the grid voltage		
	+00.00.30	Send SWA_TC_EAS1_GRID_CTRL_WRITE ZIA58781 SWA_TC_EAS1_GRID_CTRL_WRITE TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60423 BYTE_0 = 0x00 <hex> PIA60424 BYTE_1 = 0x08 <hex> PIA60425 BYTE_2 = 0x00 <hex>		
16		Step 16 Next step(s): -> 17		
		Load the voltage offsets		
	+00.00.30	Send SWA_TC_EAS1_SET_ANAL_VOLT_OFFSET ZIA58769 SWA_TC_EAS1_SET_ANAL_VOLT_OFFSET TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60411 AVO_0 = 0x00 <hex> PIA60412 AVO_1 = 0x00 <hex> PIA60415 AVO_2 = 0x00 <hex> PIA60416 AVO_3 = 0x00 <hex> PIA60417 AVO_4 = 0x00 <hex> PIA60418 AVO_5 = 0x00 <hex> PIA60419 AVO_6 = 0x00 <hex> PIA60420 AVO_7 = 0x00 <hex> PIA60421 AVO_8 = 0x00 <hex>		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		PIA60422 AVO_9 = 0x00 <hex> PIA60413 AVO_10 = 0x00 <hex> PIA60414 AVO_11 = 0x00 <hex>		
17		Step 17 Next step(s): -> 18		
		Upload dither		
	+00.00.30	Send SWA_TC_EAS1_UPLOAD_DITHER ZIA58754 SWA_TC_EAS1_UPLOAD_DITHER TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60736 DR_0 = 0x0 <hex> PIA60737 DR_1 = 0x0 <hex> PIA60738 DR_2 = 0x0 <hex>		
18		Step 18 Next step(s): -> 19		
		Set Pre-Amp 1 control data		
	+00.00.30	Send SWA_TC_EAS1_SET_PRE_AMP_DATA ZIA58774 SWA_TC_EAS1_SET_PRE_AMP_DATA TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60013 PRE_AMP_ID = PRE-AMP1 (Def) PIA60429 CMD_DATA_0 = 0x00 <hex> PIA60430 CMD_DATA_1 = 0x0F <hex> PIA60431 CMD_DATA_2 = 0xF0 <hex>		
19		Step 19 Next step(s): -> 20		
		Set Pre-Amp 2 control data		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.00.30	Send SWA_TC_EAS1_SET_PRE_AMP_DATA ZIA58774 SWA_TC_EAS1_SET_PRE_AMP_DATA TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60013 PRE_AMP_ID = PRE-AMP2 PIA60429 CMD_DATA_0 = 0x00 <hex> PIA60430 CMD_DATA_1 = 0x0F <hex> PIA60431 CMD_DATA_2 = 0xF0 <hex>		
20		Step 20 Next step(s): -> 21		
		Load the threshold values		
	+00.00.30	Send SWA_TC_EAS1_SET_PREAMP_DATA ZIA58797 SWA_TC_EAS1_SET_PREAMP_DATA TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60174 CMD_DATA_TH1 = 0x5F40 <hex> PIA60185 CMD_DATA_TH2 = 0x5F41 <hex> PIA60196 CMD_DATA_TH3 = 0x5F42 <hex> PIA60200 CMD_DATA_TH4 = 0x5F43 <hex> PIA60201 CMD_DATA_TH5 = 0x5F44 <hex> PIA60202 CMD_DATA_TH6 = 0x5F45 <hex> PIA60203 CMD_DATA_TH7 = 0x6586 <hex> PIA60204 CMD_DATA_TH8 = 0x6587 <hex> PIA60205 CMD_DATA_TH9 = 0x66C8 <hex> PIA60175 CMD_DATA_TH10 = 0x5F49 <hex> PIA60176 CMD_DATA_TH11 = 0x5F4A <hex> PIA60177 CMD_DATA_TH12 = 0x5F4B <hex> PIA60178 CMD_DATA_TH13 = 0x5F4C <hex> PIA60179 CMD_DATA_TH14 = 0x5F4D <hex> PIA60180 CMD_DATA_TH15 = 0x5F4E <hex> PIA60181 CMD_DATA_TH16 = 0x5F4F <hex> PIA60182 CMD_DATA_TH17 = 0x5F40 <hex> PIA60183 CMD_DATA_TH18 = 0x5F41 <hex> PIA60184 CMD_DATA_TH19 = 0x5F42 <hex> PIA60186 CMD_DATA_TH20 = 0x5F43 <hex> PIA60187 CMD_DATA_TH21 = 0x5F44 <hex> PIA60188 CMD_DATA_TH22 = 0x5F45 <hex> PIA60189 CMD_DATA_TH23 = 0x5F46 <hex> PIA60190 CMD_DATA_TH24 = 0x5F47 <hex>		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		PIA60191 CMD_DATA_TH25 = 0x5F48 <hex> PIA60192 CMD_DATA_TH26 = 0x5F49 <hex> PIA60193 CMD_DATA_TH27 = 0x5F4A <hex> PIA60194 CMD_DATA_TH28 = 0x5CCB <hex> PIA60195 CMD_DATA_TH29 = 0x5F4C <hex> PIA60197 CMD_DATA_TH30 = 0x5F4D <hex> PIA60198 CMD_DATA_TH31 = 0x5F4E <hex> PIA60199 CMD_DATA_TH32 = 0x5F4F <hex>		
21		<p style="text-align: center;">Step 21</p> <p><i>Next step(s):</i> -> 22</p>		
		Set hemisphere voltage look-up table		
	+00.00.30	Send SWA_TC_EAS1_SET_HEM_VOLT_LUT ZIA58764 SWA_TC_EAS1_SET_HEM_VOLT_LUT TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60474 VAL_0 = 0x0 <hex> PIA60475 VAL_1 = 0x0 <hex> PIA60578 VAL_2 = 0x0 <hex> PIA60589 VAL_3 = 0x0 <hex> PIA60600 VAL_4 = 0x0 <hex> PIA60611 VAL_5 = 0x0 <hex> PIA60622 VAL_6 = 0x0 <hex> PIA60633 VAL_7 = 0x0 <hex> PIA60644 VAL_8 = 0x0 <hex> PIA60655 VAL_9 = 0x0 <hex> PIA60476 VAL_10 = 0x0 <hex> PIA60487 VAL_11 = 0x0 <hex> PIA60498 VAL_12 = 0x0 <hex> PIA60509 VAL_13 = 0x0 <hex> PIA60520 VAL_14 = 0x0 <hex> PIA60531 VAL_15 = 0x0 <hex> PIA60542 VAL_16 = 0x0 <hex> PIA60553 VAL_17 = 0x0 <hex> PIA60564 VAL_18 = 0x0 <hex> PIA60575 VAL_19 = 0x0 <hex> PIA60579 VAL_20 = 0x0 <hex> PIA60580 VAL_21 = 0x0 <hex> PIA60581 VAL_22 = 0x0 <hex> PIA60582 VAL_23 = 0x0 <hex>		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		PIA60583 VAL_24 = 0x0 <hex>		
		PIA60584 VAL_25 = 0x0 <hex>		
		PIA60585 VAL_26 = 0x0 <hex>		
		PIA60586 VAL_27 = 0x0 <hex>		
		PIA60587 VAL_28 = 0x0 <hex>		
		PIA60588 VAL_29 = 0x0 <hex>		
		PIA60590 VAL_30 = 0x0 <hex>		
		PIA60591 VAL_31 = 0x0 <hex>		
		PIA60592 VAL_32 = 0x0 <hex>		
		PIA60593 VAL_33 = 0x0 <hex>		
		PIA60594 VAL_34 = 0x0 <hex>		
		PIA60595 VAL_35 = 0x0 <hex>		
		PIA60596 VAL_36 = 0x0 <hex>		
		PIA60597 VAL_37 = 0x0 <hex>		
		PIA60598 VAL_38 = 0x0 <hex>		
		PIA60599 VAL_39 = 0x0 <hex>		
		PIA60601 VAL_40 = 0x0 <hex>		
		PIA60602 VAL_41 = 0x0 <hex>		
		PIA60603 VAL_42 = 0x0 <hex>		
		PIA60604 VAL_43 = 0x0 <hex>		
		PIA60605 VAL_44 = 0x0 <hex>		
		PIA60606 VAL_45 = 0x0 <hex>		
		PIA60607 VAL_46 = 0x0 <hex>		
		PIA60608 VAL_47 = 0x0 <hex>		
		PIA60609 VAL_48 = 0x0 <hex>		
		PIA60610 VAL_49 = 0x0 <hex>		
		PIA60612 VAL_50 = 0x0 <hex>		
		PIA60613 VAL_51 = 0x0 <hex>		
		PIA60614 VAL_52 = 0x0 <hex>		
		PIA60615 VAL_53 = 0x0 <hex>		
		PIA60616 VAL_54 = 0x0 <hex>		
		PIA60617 VAL_55 = 0x0 <hex>		
		PIA60618 VAL_56 = 0x0 <hex>		
		PIA60619 VAL_57 = 0x0 <hex>		
		PIA60620 VAL_58 = 0x0 <hex>		
		PIA60621 VAL_59 = 0x0 <hex>		
		PIA60623 VAL_60 = 0x0 <hex>		
		PIA60624 VAL_61 = 0x0 <hex>		
		PIA60625 VAL_62 = 0x0 <hex>		
		PIA60626 VAL_63 = 0x0 <hex>		
		PIA60627 VAL_64 = 0x0 <hex>		
		PIA60628 VAL_65 = 0x0 <hex>		
		PIA60629 VAL_66 = 0x0 <hex>		
		PIA60630 VAL_67 = 0x0 <hex>		
		PIA60631 VAL_68 = 0x0 <hex>		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		PIA60632 VAL_69 = 0x0 <hex>		
		PIA60634 VAL_70 = 0x0 <hex>		
		PIA60635 VAL_71 = 0x0 <hex>		
		PIA60636 VAL_72 = 0x0 <hex>		
		PIA60637 VAL_73 = 0x0 <hex>		
		PIA60638 VAL_74 = 0x0 <hex>		
		PIA60639 VAL_75 = 0x0 <hex>		
		PIA60640 VAL_76 = 0x0 <hex>		
		PIA60641 VAL_77 = 0x0 <hex>		
		PIA60642 VAL_78 = 0x0 <hex>		
		PIA60643 VAL_79 = 0x0 <hex>		
		PIA60645 VAL_80 = 0x0 <hex>		
		PIA60646 VAL_81 = 0x0 <hex>		
		PIA60647 VAL_82 = 0x0 <hex>		
		PIA60648 VAL_83 = 0x0 <hex>		
		PIA60649 VAL_84 = 0x0 <hex>		
		PIA60650 VAL_85 = 0x0 <hex>		
		PIA60651 VAL_86 = 0x0 <hex>		
		PIA60652 VAL_87 = 0x0 <hex>		
		PIA60653 VAL_88 = 0x0 <hex>		
		PIA60654 VAL_89 = 0x0 <hex>		
		PIA60656 VAL_90 = 0x0 <hex>		
		PIA60657 VAL_91 = 0x0 <hex>		
		PIA60658 VAL_92 = 0x0 <hex>		
		PIA60659 VAL_93 = 0x0 <hex>		
		PIA60660 VAL_94 = 0x0 <hex>		
		PIA60661 VAL_95 = 0x0 <hex>		
		PIA60662 VAL_96 = 0x0 <hex>		
		PIA60663 VAL_97 = 0x0 <hex>		
		PIA60664 VAL_98 = 0x0 <hex>		
		PIA60665 VAL_99 = 0x0 <hex>		
		PIA60477 VAL_100 = 0x0 <hex>		
		PIA60478 VAL_101 = 0x0 <hex>		
		PIA60479 VAL_102 = 0x0 <hex>		
		PIA60480 VAL_103 = 0x0 <hex>		
		PIA60481 VAL_104 = 0x0 <hex>		
		PIA60482 VAL_105 = 0x0 <hex>		
		PIA60483 VAL_106 = 0x0 <hex>		
		PIA60484 VAL_107 = 0x0 <hex>		
		PIA60485 VAL_108 = 0x0 <hex>		
		PIA60486 VAL_109 = 0x0 <hex>		
		PIA60488 VAL_110 = 0x0 <hex>		
		PIA60489 VAL_111 = 0x0 <hex>		
		PIA60490 VAL_112 = 0x0 <hex>		
		PIA60491 VAL_113 = 0x0 <hex>		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		PIA60492 VAL_114 = 0x0 <hex>		
		PIA60493 VAL_115 = 0x0 <hex>		
		PIA60494 VAL_116 = 0x0 <hex>		
		PIA60495 VAL_117 = 0x0 <hex>		
		PIA60496 VAL_118 = 0x0 <hex>		
		PIA60497 VAL_119 = 0x0 <hex>		
		PIA60499 VAL_120 = 0x0 <hex>		
		PIA60500 VAL_121 = 0x0 <hex>		
		PIA60501 VAL_122 = 0x0 <hex>		
		PIA60502 VAL_123 = 0x0 <hex>		
		PIA60503 VAL_124 = 0x0 <hex>		
		PIA60504 VAL_125 = 0x0 <hex>		
		PIA60505 VAL_126 = 0x0 <hex>		
		PIA60506 VAL_127 = 0x0 <hex>		
		PIA60507 VAL_128 = 0x0 <hex>		
		PIA60508 VAL_129 = 0x0 <hex>		
		PIA60510 VAL_130 = 0x0 <hex>		
		PIA60511 VAL_131 = 0x0 <hex>		
		PIA60512 VAL_132 = 0x0 <hex>		
		PIA60513 VAL_133 = 0x0 <hex>		
		PIA60514 VAL_134 = 0x0 <hex>		
		PIA60515 VAL_135 = 0x0 <hex>		
		PIA60516 VAL_136 = 0x0 <hex>		
		PIA60517 VAL_137 = 0x0 <hex>		
		PIA60518 VAL_138 = 0x0 <hex>		
		PIA60519 VAL_139 = 0x0 <hex>		
		PIA60521 VAL_140 = 0x0 <hex>		
		PIA60522 VAL_141 = 0x0 <hex>		
		PIA60523 VAL_142 = 0x0 <hex>		
		PIA60524 VAL_143 = 0x0 <hex>		
		PIA60525 VAL_144 = 0x0 <hex>		
		PIA60526 VAL_145 = 0x0 <hex>		
		PIA60527 VAL_146 = 0x0 <hex>		
		PIA60528 VAL_147 = 0x0 <hex>		
		PIA60529 VAL_148 = 0x0 <hex>		
		PIA60530 VAL_149 = 0x0 <hex>		
		PIA60532 VAL_150 = 0x0 <hex>		
		PIA60533 VAL_151 = 0x0 <hex>		
		PIA60534 VAL_152 = 0x0 <hex>		
		PIA60535 VAL_153 = 0x0 <hex>		
		PIA60536 VAL_154 = 0x0 <hex>		
		PIA60537 VAL_155 = 0x0 <hex>		
		PIA60538 VAL_156 = 0x0 <hex>		
		PIA60539 VAL_157 = 0x0 <hex>		
		PIA60540 VAL_158 = 0x0 <hex>		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		PIA60541 VAL_159 = 0x0 <hex> PIA60543 VAL_160 = 0x0 <hex> PIA60544 VAL_161 = 0x0 <hex> PIA60545 VAL_162 = 0x0 <hex> PIA60546 VAL_163 = 0x0 <hex> PIA60547 VAL_164 = 0x0 <hex> PIA60548 VAL_165 = 0x0 <hex> PIA60549 VAL_166 = 0x0 <hex> PIA60550 VAL_167 = 0x0 <hex> PIA60551 VAL_168 = 0x0 <hex> PIA60552 VAL_169 = 0x0 <hex> PIA60554 VAL_170 = 0x0 <hex> PIA60555 VAL_171 = 0x0 <hex> PIA60556 VAL_172 = 0x0 <hex> PIA60557 VAL_173 = 0x0 <hex> PIA60558 VAL_174 = 0x0 <hex> PIA60559 VAL_175 = 0x0 <hex> PIA60560 VAL_176 = 0x0 <hex> PIA60561 VAL_177 = 0x0 <hex> PIA60562 VAL_178 = 0x0 <hex> PIA60563 VAL_179 = 0x0 <hex> PIA60565 VAL_180 = 0x0 <hex> PIA60566 VAL_181 = 0x0 <hex> PIA60567 VAL_182 = 0x0 <hex> PIA60568 VAL_183 = 0x0 <hex> PIA60569 VAL_184 = 0x0 <hex> PIA60570 VAL_185 = 0x0 <hex> PIA60571 VAL_186 = 0x0 <hex> PIA60572 VAL_187 = 0x0 <hex> PIA60573 VAL_188 = 0x0 <hex> PIA60574 VAL_189 = 0x0 <hex> PIA60576 VAL_190 = 0x0 <hex> PIA60577 VAL_191 = 0x0 <hex>		
22		Step 22 Next step(s): -> 23		
		Select the strahl bin		
	+00.00.30	Send SWA_TC_EAS1_STHRAL_SEL ZIA58796 SWA_TC_EAS1_STHRAL_SEL TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60173 STRAHL_ID = 0x18 <hex>		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
23		<p style="text-align: center;">Step 23</p> <p><i>Next step(s):</i> -> 24</p>		
		Set Moment elab		
	+00.00.30	Send SWA_TC_EAS1_SET_MOM_ELAB ZIA58786 SWA_TC_EAS1_SET_MOM_ELAB TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60338 TH1 = 0x05 <hex> PIA60339 TH2 = 0x10 <hex>		
24		<p style="text-align: center;">Step 24</p> <p><i>Next step(s):</i> -> 25</p>		
		HK data request		
	+00.00.30	Send SWA_TC_EAS1_HK_DATA_REQ ZIA58782 SWA_TC_EAS1_HK_DATA_REQ TC Control Flags: GBM IL DSE --Y NC ---		
25		<p style="text-align: center;">Step 25</p> <p><i>Next step(s):</i> -> 26</p>		
		Switch EAS1 off		
	+00.02.00	Send SWA_TC_EAS1_OFF ZIA58756 SWA_TC_EAS1_OFF TC Control Flags: GBM IL DSE --Y NC ---		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
26		<p style="text-align: center;">Step 26</p> <p><i>Next step(s):</i> -> 27</p>		
		Modify DPU configuration parameters		
	+00.00.30	<pre> 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 = 0x1003 <hex> PIA60135 PAR_DESC_SIZE = 6 <dec> PIA60134 PAR_DESC = 0xDE <hex> PIA60134 PAR_DESC = 0xB8 <hex> PIA60134 PAR_DESC = 0x51 <hex> PIA60134 PAR_DESC = 0x02 <hex> PIA60134 PAR_DESC = 0x9C <hex> PIA60134 PAR_DESC = 0x80 <hex> </pre>		
27		<p style="text-align: center;">Step 27</p> <p><i>Next step(s):</i> -> 28</p>		
		Accept DPU configuration parameter change		
	+00.00.30	<pre> Send SWA_TC_DPU_ACCEPT_CONF_PARS ZIA58708 SWA_TC_DPU_ACCEPT_CONF_PARS TC Control Flags: GBM IL DSE --Y NC --- </pre>		
28		<p style="text-align: center;">Step 28</p> <p><i>Next step(s):</i> -> 29</p>		
		Power on EAS1 using macros		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.00.30	Send SWA_TC_EAS1_PWR_ON ZIA58760 SWA_TC_EAS1_PWR_ON TC Control Flags: GBM IL DSE --Y NC ---		
29		Step 29 Next step(s): -> 30		
		Start the POST service macro		
	+00.01.00	Send SWA_TC_EAS1_START_SERVICE_MACRO ZIA58934 SWA_TC_EAS1_START_SERVICE_MACRO TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60739 EAS1_MACRO_ID = POST		
30		Step 30 Next step(s): -> 31		
		EAS1 to IDLE mode		
	+00.00.30	Send SWA_TC_EAS1_IDLE_MODE ZIA58753 SWA_TC_EAS1_IDLE_MODE TC Control Flags: GBM IL DSE --Y NC ---		
31		Step 31 Next step(s): -> 32		
		EAS1 to RUN mode		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.00.30	Send SWA_TC_EAS1_RUN_MODE ZIA58758 SWA_TC_EAS1_RUN_MODE TC Control Flags: GBM IL DSE --Y NC ---		
		EAS1 to Engineering mode 2		
	+00.00.30	Send SWA_TC_EAS1_ENG2_MODE ZIA58788 SWA_TC_EAS1_ENG2_MODE TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60165 MCP_WAIT = 10 <dec>		
32		Step 32 Next step(s): -> 33		
		Run the post-engineering mode macro		
	+00.02.00	Send SWA_TC_EAS1_START_SERVICE_MACRO ZIA58934 SWA_TC_EAS1_START_SERVICE_MACRO TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60739 EAS1_MACRO_ID = POST_ENG		
		EAS1 to Engineering mode 3		
	+00.00.30	Send SWA_TC_EAS1_ENG3_MODE ZIA58789 SWA_TC_EAS1_ENG3_MODE TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60101 STARTING_MCP = 0 <dec> PIA60100 FINAL_MCP = 0xFF <hex> PIA60102 STEP_MCP = 0xF <hex> PIA60437 FIRST_RAMP_TIME = 0xA <hex> PIA60444 INTERMEDIATE_RAMP_TIME = 1 <dec> PIA60165 MCP_WAIT = 2 <dec> PIA60760 HEMBIN = 0x20 <hex> PIA60761 DEFNUM = 0x8 <hex> PIA60762 CTRL = SWEEP_MACRO (Def)		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
33		Step 33 <i>Next step(s):</i> -> 34		
		Run the post-engineering mode macro		
	+00.04.00	Send SWA_TC_EAS1_START_SERVICE_MACRO ZIA58934 SWA_TC_EAS1_START_SERVICE_MACRO TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60739 EAS1_MACRO_ID = POST_ENG		
		EAS1 to Engineering mode 4		
	+00.00.30	Send SWA_TC_EAS1_ENG4_MODE ZIA58790 SWA_TC_EAS1_ENG4_MODE TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60104 START_TH_LEVEL = 0x724 <hex> PIA60103 END_TH_LEVEL = 0x477 <hex> PIA60105 TH_STEP = 0x200 <hex> PIA60106 MCP_VAL = 0x0 <hex> PIA60165 MCP_WAIT = 0xA <hex> PIA60851 ACQ_TIME = 2 <dec> PIA60760 HEMBIN = 0x20 <hex> PIA60761 DEFNUM = 0x8 <hex>		
34		Step 34 <i>Next step(s):</i> -> 35		
		Run the post-engineering mode macro		
	+00.02.00	Send SWA_TC_EAS1_START_SERVICE_MACRO ZIA58934 SWA_TC_EAS1_START_SERVICE_MACRO TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60739 EAS1_MACRO_ID = POST_ENG		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		EAS1 to Engineering mode 5		
	+00.00.30	Send SWA_TC_EAS1_ENG5_MODE ZIA58791 SWA_TC_EAS1_ENG5_MODE TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60454 PA1_STIM_LEV = 0xFF <hex> PIA60455 PA2_STIM_LEV = 0xFF <hex> PIA60040 START_TH_LEVEL = 0x724 <hex> PIA60039 END_TH_LEVEL = 0x477 <hex> PIA60041 TH_STEP = 0x76 <hex> PIA60106 MCP_VAL = 0x0 <hex> PIA60171 MCP_WAIT = 0xA <hex> PIA60165 MCP_WAIT = 2 <dec>		
35		Step 35 Next step(s): -> 36		
		Run the post-engineering mode macro		
	+00.02.00	Send SWA_TC_EAS1_START_SERVICE_MACRO ZIA58934 SWA_TC_EAS1_START_SERVICE_MACRO TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60739 EAS1_MACRO_ID = POST_ENG		
		EAS1 to Engineering mode 6		
	+00.00.30	Send SWA_TC_EAS1_ENG6_MODE ZIA58792 SWA_TC_EAS1_ENG6_MODE TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60457 STIM_HIGH_LEVEL = 0xFF <hex> PIA60458 STIM_LOW_LEVEL = 0x32 <hex> PIA60459 STIM_STEP = 0x29 <hex> PIA60106 MCP_VAL = 0x0 <hex> PIA60171 MCP_WAIT = 0xA <hex> PIA60165 MCP_WAIT = 2 <dec>		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
36		<p style="text-align: center;">Step 36</p> <p><i>Next step(s):</i> -> 37</p>		
		Run the post-engineering mode macro		
	+00.02.00	<pre>Send SWA_TC_EAS1_START_SERVICE_MACRO ZIA58934 SWA_TC_EAS1_START_SERVICE_MACRO TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60739 EAS1_MACRO_ID = POST_ENG</pre>		
		EAS1 to Engineering mode 8		
	+00.00.30	<pre>Send SWA_TC_EAS1_ENG8_MODE ZIA58794 SWA_TC_EAS1_ENG8_MODE TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60735 VR = 0xFF <hex> PIA60716 HV = 0x32 <hex> PIA60165 MCP_WAIT = 0x10 <hex></pre>		
37		<p style="text-align: center;">Step 37</p> <p><i>Next step(s):</i> -> 38</p>		
		Run the post-engineering mode macro		
	+00.02.00	<pre>Send SWA_TC_EAS1_START_SERVICE_MACRO ZIA58934 SWA_TC_EAS1_START_SERVICE_MACRO TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60739 EAS1_MACRO_ID = POST_ENG</pre>		
		EAS1 to Engineering mode 9		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.00.30	Send SWA_TC_EAS1_ENG9_MODE ZIA58795 SWA_TC_EAS1_ENG9_MODE TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60165 MCP_WAIT = 0x10 <hex>		
38		Step 38 Next step(s): -> 39		
		Run the post-engineering mode macro		
	+00.02.00	Send SWA_TC_EAS1_START_SERVICE_MACRO ZIA58934 SWA_TC_EAS1_START_SERVICE_MACRO TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60739 EAS1_MACRO_ID = POST_ENG		
39		Step 39 Next step(s): -> 40		
		Set the master control register for manual heater on EAS1		
	+00.00.30	Send SWA_TC_EAS1_MASTER_REG_WRITE ZIA58776 SWA_TC_EAS1_MASTER_REG_WRITE TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60423 BYTE_0 = 0x00 <hex> PIA60424 BYTE_1 = 0x40 <hex> PIA60425 BYTE_2 = 0x60 <hex>		
40		Step 40 Next step(s): -> END		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		Turn off heater (it is off anyway so this should do nothing)		
	+00.00.30	Send SWA_TC_EAS1_MAN_HEATHER ZIA58757 SWA_TC_EAS1_MAN_HEATHER TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PIA60773 HT_0 = 0x00 <hex> PIA60774 HT_1 = 0x00 <hex> PIA60775 HT_2 = 0x00 <hex>		
AIAV151A		End of Sequence		
End of Procedure				