

Procedure. Ref.: SVT_OPM_5070 (1,1) CLEAN SLATE

Procedure Title: Clean Slate
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Purpose of Procedure:

This procedure executes the Load DPUOS. This switches ON the DPU Scrubbing which allows the DPU to continuously check its own code.

This procedure is foreseen to be used during the OM SVT.

Initial State: OM ON in SAFE Mode, DPU Code has been loaded.

Final State: OM ON in SAFE Mode, DPU code running.

Step	Time	Activity/Remarks	Command	TM Verification
1		Confirm OM in SAFE Mode. Check HK status and packet arrival every 10 seconds.		<u>AND: H100</u> H5395 "OM STATE" = SAFE H5405 "ICU STATE" = OPERATIONAL H5450 "DPU STATE" = BOOT
2		Switch to the DPU Loadable Code (DPUOS). This TC instructs the DPU to load the DPUOS	<u>H7202</u> LOAD DPUOS	
3	00:00:10	Wait for up to 10 seconds for the DA_DPUOS_READY Data alert. "Jim from the Rim" Packet 92202 (PK Dump 1146 OM4)		<u>AND: H110</u> H5450 "DPU STATE" = DPUOS H5455 "BLUE 1 DSP STAT" = H5460 "BLUE 2 DSP STAT" = H5465 "RED DSP STAT" = H5470 "BLUE 1 DSP DC" = H5475 "BLUE 2 DSP DC" = H5365 "TRACKING" = H5480 "SWAP UNIT ID" = H5485 "DPU TASK ID" =
4		Enable RED DSP (Digital Signal Processor)	<u>H7207</u> ENABLE DSP **H0522 "COLOURED DSP" = RED **H0016 "ENABLE CNTL" = ENABLED	
5	00:00:10	Wait for up to 10 seconds. Check TM status		<u>AND: H110</u> H5450 "DPU STATE" = DPUOS H5455 "BLUE 1 DSP STAT" = OFF H5460 "BLUE 2 DSP STAT" = OFF H5465 "RED DSP STAT" = ON
6		Enable BLUE 1 DSP (Digital Signal Processor)	<u>H7207</u> ENABLE DSP **H0522 "COLOURED DSP" = BLUE 1 **H0016 "ENABLE CNTL" = ENABLED	
7	00:00:10	Wait for up to 10 seconds. Check TM status		<u>AND: H110</u> H5450 "DPU STATE" = DPUOS H5455 "BLUE 1 DSP STAT" = ON H5460 "BLUE 2 DSP STAT" = OFF H5465 "RED DSP STAT" = ON
8		Enable BLUE 2 DSP (Digital Signal Processor)	<u>H7207</u> ENABLE DSP **H0522 "COLOURED DSP" = BLUE 2 **H0016 "ENABLE CNTL" = ENABLED	
9	00:00:10	Wait for up to 10 seconds. Check TM status		<u>AND: H110</u> H5450 "DPU STATE" = DPUOS H5455 "BLUE 1 DSP STAT" = ON H5460 "BLUE 2 DSP STAT" = ON H5465 "RED DSP STAT" = ON

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10		Select Blue 2 as the Klingon. The Klingon in DPUOS is the DSP that a) finishes the memory access and b) holds on to the bus until the arbiter informs it to give up. The White DSP is the default Klingon. This is changed to BLUE 2 to allow the BUS IO interrupt to occur at a known location	H7206 SELECT KLINGON **H0523 "SINGLE DSP" = BLUE 2	
11		Initialise DPU IC_INIT_DPU Zeroes memory, readies the swap units.	H7248 INIT DPU	
12		A NCR 94 Triggered DPU Crash may be expected at this point if the uploaded code contains FEC errors. If DPU crashes execute CRP procedure : CRP_OPM_9540 DPU Death		
13		Wait for up to 25s for the DA_EOT_INIT_DPU event to confirm completion of the DPU initialisation. (Dave from the Grave) After initialisation of the DPU, the DPU Red Scrubbing is activated. This scrubbing is continuously exercised and protects against single bit error and reports multiple bit errors found in the program storage. This helps maintain the integrity of the DPU codes stored in the program RAM. Packet 92210 (PK Dump 1154 OM4)		AND: H910 H7680 "TIMESTAMP" =
14		Enable Reference Frame Verbosity. IC_ENBL_VERBOSE This TC allows the DD_REF TM packet to be produced in the verbose form.	H7244 ENABLE VERBOSE **H0760 "DATA TYPE" = REF FRAME **H0016 "ENABLE CNTL" = ENABLED	
15		END OF PROCEDURE		